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STATE OF NEW-YORK.

No. 108.

IN SENATE,

April 8, 1843.

1842-3-4-5

SECOND ANNUAL REPORT

Of the American Institute, on the subject of Agriculture.

TO THE LEGISLATURE OF THE STATE OF NEW-YORK.

An anxious desire to show that the important objects contemplated in the charter of the American Institute have been faithfully pursued, and that the conditions of the appropriation under the late "Act to Promote Agriculture," have been scrupulously complied with, is deemed a justification for the Trustees of this Institute to volunteer their

SECOND ANNUAL REPORT:

They deem it a cardinal principle, that every dollar received from the Treasury ofthe State, to be employed for beneficial public purposes, should be clearly accounted for; and that any individual, or association, refusing or neglecting, are unworthy recipients of Legislative bounty. Aware of the extreme sensitiveness of the public mind in relation to monetary affairs, induced by neglect or dishonorable and faithless Trustees, they have simplified and thrown open all their accounts, and invited investigation, not only from their officers but members, and all others contributing to its aid, or in any way directly or indirectly concerned. Ample vouchers of every transaction are placed on file. The statements submitted are summaries extracted from these accounts.

With the further view of making the members and the public better acquainted with the concerns and operations of the Institute, this report is submitted in all confidence that it will not be deemed obtrusive, but that it will be as acceptable as the first, which was honored by being printed, and numbered with the Legislative documents of the State. A few extra copies for distribution among our inquiring agriculturists would be of trifling expense, and might contribute to extend the spirit of agricultural improvement.

It has been the intention in this report, to embrace generally those transactions which have arisen out of the agricultural department of the Institute during the past year, passing over most of the other proceedings without even a reference. Multitudes of reports made at stated meetings by committees on scientific and mechanical subjects; and by judges at our fairs on inventions, &c. are entirely omitted, because if included, they would form a volume too formidable for publication.

The names of the officers are given at length; many of them are extensively known, and possess the confidence of the public. A large majority are practical men, who stand high in the different professions and occupations in which they are engaged. Their respective dutives are defined in the by-laws, and in the records of the proceedings of meetings.

To the Managers, aided by the Trustees, is assigned the conducting of the Fairs which are held once a year; and their design is especially to promote and perfect the agriculture of our country. The circulars giving notice of the Fifteenth Annual Fair will be found marked A. naming the time, place, and the general plan of proceedings, and designating premiums for contributions, which need the stimulus of competition to bring them to perfection. The tardy advances of agriculture compared with mechanism and the arts, attributable very much, no doubt, to the scattered condition of that great interest, has induced the Managers greatly to increase the number of promised premiums in advance, with the design of bringing an early influence to bear on agriculture and horticulture. The effect has been to multiply at our Fairs, the exhibited agricultural articles tenfold in a few years.

The list of judges on whose written reports are founded the award of premiums, is marked B. From their great number, and the variety of articles which come under their consideration, much attention, an extensive knowledge of men, and great discrimination and judgment are required in their selection. They must, moreover, be men of standing and character, in order that their decisions may obtain respect. The conductors of the Institute have been long and strongly impressed with the belief, that on this selection very much depends the character, dignity, and success of the Institute; and they have therefore spared no pains in attending to this duty. To avoid the influence of neighborhood or family associations, business and other connections, the judges have been composed, as far as practicable of disconnected individuals; and the better to ensure this, individuals are appointed residing at a distance from each other. Thus the jealousy towards business connexions, family influences, &c. is avoided, which in the heat of competition is prone to arise. As far as practicable, all knowledge of the exhibitors is kept from the judges; names of exhibitors are erased and numbers substituted. These and other precautions, and a strict adherence to the decisions, unless palpable mistakes are apparent, have given to the awards of the Managers an unprecedented consideration, which even the sharpest competitors rarely question.

The comparatively few selected reports of the judges of the Fair, marked C., are deserving of attention. The number of acres of cabbages raised annually near New-York, along the shores of Long-Island, and Staten-Island, New-Jersey, &c., are estimated at from four to five hundred acres, yielding eight or nine thousand heads per acre. They are sold from one or two to twelve and a half cents per head in the New-York market. Suppose the number of acres four hundred, producing eight thousand heads per acre, and allowing four cents to be the average price, the product will be one hundred and twenty thousand dollars per annum. The quantity of cabbages purposely prepared for ships, and all important to the health of crews on long voyages, is very considerable; and in their prepared state, they bring a much higher price. This amount, distributed among two hundred and forty farmers, would give each five hundred dollars—an item not inconsiderable to be added to the other products of their fields and gardens. The skillful and industrious cultivator of the ground in the vicinity of a good market, though

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he may possess but a few acres, need not apprehend want. Many, whose thoughts are turned to the far west, would do well, before they embark, to reflect on the facts which this report discloses.

The report on Mr. Betts' farm shows the importance of good culture, in his bountiful crops. Two hundred and five and a half bushels of corn in the ear, and seventy-seven bushels of oats per acre, may be instanced as examples.

The remarks on improving our live stock, should not be overlooked. The difference in a breed of cows which give daily (on ordinary feed) twenty-eight quarts, or only one-fourth that quantity, and that attributable to the breed, surely does not require comment for a thinking farmer.

The information afforded on the subject of silk, is practical and timely. We believe our climate much more congenial to the silk worm than the silk growing districts of Europe. Here, the worm breaks forth spontaneously from the egg; there, artificial heat is required. We can dispense with much which foreign treatises on the silk culture describe as essential. The Fifteenth Fair shows, from its greatly increased contribution of silk, that the silk culture is progressing with a sure pace in our country. Every succeeding Fair, it is confidently believed, will afford still stronger evidence of its progress. But in all new undertakings, though apparently simple, the most cautious are liable to missteps. Directions are given, which may avoid errors calculated to discourage and greatly retard the progress of silk. The cultivator is recommended first to supply himself with the best kind of eggs, and the proper reel. Eggs from the Peanut variety of cocoons, and the Piedmontese reel, as improved in America, are recommended as decidedly the best. The facts that the cost of silk is two dollars per pound here, and that the thread varies in value from two to six dollars per pound, according to the skill and care in its preparation, should never be lost sight of. And the further additional fact, that the first premium was gained by one possessing but little experience, proves beyond question that native ingenuity can accomplish all that is required for producing the article fit for market. The superior advantage which the silk reelers of Italy have over the reelers of Bengal, viz: one dollar and a half per pound, they never can continue to maintain here, when American skill has been fairly brought to bear upon it.

The communications marked D. are from fortunate competitors, who have in their own language described the different modes and processes of accomplishing their objects. The evidences of their skill and industry are afforded in the articles brought to the Fair, and which commanded the premium. As they are the results of the experience of men who have been successful in the trial with formidable competitors, and as their characters are known and can be relied on, their statements are of great value, and deserve a careful perusal. They are selected from returns, many of which have been excluded because they were too general to be of use. Great efforts have been made to obtain full reports; in addition to personal applications, notices were given by circulars at an early day, and long before the Fair. The following circular was forwarded to each of the successful competitors after the Fair:

"*To competitors entitled to premiums awarded at the Fifteenth Annual Fair of the American Institute.*

Competent and disinterested judges have, after full examination and comparison, reported in favor of your contributions, and the premiums have been accordingly awarded to you. When the intensity of the competition is considered, and that not less than seventeen thousand articles were exhibited, you have occasion to be proud of the distinction which the testimonials of merit in your several occupations confer.

For the purpose of advancing the objects of this Institute through improvements in agriculture and the arts, your aid is requested in affording information of the best means for effecting such improvement; and for that purpose, detailed written accounts, where they have not already been given, are requested from you, showing the process undergone in perfecting the article which has commanded the premium. And in case of machinery, your view of the principles of its operations is desired, with such facts as show what it has actually accomplished, and all its peculiar advantages, in order to enable the Institute to complete a full report of the last Fair, beneficial to our whole community. The names of the places where the premium articles are manufactured, and where sold, with the wholesale and retail prices, should likewise be supplied.

With the laudable design of advancing the agricultural interests of our State, a portion of the fund appropriated by the Legislature is placed at the disposal of the American Institute; and premiums from this source are authorized only on the conditions hereafter specified, which those who have been declared worthy of receiving agricultural premiums at the late Fair, are desired to comply with:

" Before any premium shall be delivered, the person claiming the same, or to whom the same shall be awarded, shall deliver in writing to the President of the Society, as accurate a description of the process in preparing the soil, including the quality and quantity of manure applied, and in raising the crop, or in feeding the animal, as may be, and also of the expense and product of the crop, or of increase in value of the animal, with the view of showing accurately the profit of cultivating the crop, or feeding or fattening the animal."

Your early reply, giving the information asked for, with any other suggestions deemed important, will be acceptable; but they should not be delayed, as the report referred to above is already in progress for publication."

The Trustees are gratified to have it in their power to state that the communications from successful competitors the last year, have been more numerous than in any former year. The importance of recording agricultural experience is more than ever appreciated; and it is believed we may confidently look forward to the time when the New-York State Agricultural Society, assisted by the extended intercourse of this Institute, shall have collected such a mass of facts as to afford on almost every subject, a plain and unerring guide to the farmer. A volume, compiled from such materials, indexed for easy reference, excluding uncertain hypothesis, and including only knowledge deduced from experience and accurate observations, and from sources that cannot be questioned, never leading into mistakes and sacrifices, would be hailed by every sensible farmer in the nation, and do more to promote and dignify agricultural study, than loads of publications not, to be sure, altogether destitute of useful matter, but interspersed with false theories, fanciful speculations and accounts of marvelous productions, extracted, if not fabricated on the spot by the publisher, to excite wonder and make his work sell. Those inveterate prejudices which prevail against book farming are greatly attributable to false directions contained in such books, made to sell; and when they have cost the farmer his crop, it is not strange that he should, for a long time after, eschew books. Give the farmer a book of facts on his occupation, and he will read and be grateful.

The list of cattle, horses and other live stock, pedigrees, &c. is designated by the letter E. By referring to the names of the exhibitors, it will be seen that the most noted breeders in our country, united in their contributions to this interesting part of the Fair. It is believed that in quality, the animals have never been exceeded at any cattle show in the United States; and the growing spirit for improving cattle, &c. was strongly manifested by the throngs of strangers that attended during each day assigned for their exhibition, and the deep interest they manifested. Many came from distant States for the sole purpose of being present at the show of cattle and stock. It is a matter of congratulation, that very many of our most distinguished and influential citizens in public and private life, are exerting their influence to improve the breed of our live stock. Many purchases were made, designed for that purpose, which have gone to distant States. The same attention and the same feed will, it may safely be said, produce four times as much when expended on an animal of the best breed, as on others of some inferior blood. The ox which weighed four thousand one hundred pounds, did not consume at all in proportion to his weight; and the cow that produced twenty-eight quarts in a day, was only an ordinary feeder. The effect cannot but be beneficial, and will assuredly be realized in an improved city market in a very few years; and it is greatly to be regretted, that the limited means of the Institute will not enable it to hold out still stronger inducements to this class of exhibitors, so as to compensate, in some measure, for the great expense of the transportation of animals from still greater distances than they yet have come. The rule of excluding animals which had already received premiums, was this year changed so as to open the whole field, unconditionally, for the *best*. The effect of this regulation, though it might have kept back middling or inferior animals, increased the number of choice ones, and was calculated to give greater satisfaction to those who from curiosity or to improve their stock, came from distant States in quest of the finest animals, many of which, under the regulations of former years, remained at home, because they were excluded from competition by a positive rule. The wide extent of competition from the national character of this Institute, conferred by its charter to promote the agriculture of the whole Union, appeared to the Managers to strengthen the arguments in favor of the repeal of the rule of former years, in order to increase the inducements for exhibitors to bring their *best cattle*, &c. from distant States. The prize of the fortunate competitor under the new regulation is more valuable as it was won in an unrestricted competition against every thing, whether it had received a premium or not. Such an institution seems to be required in our great State; and our aim should be to procure the best productions of agriculture, the best machines and implements, whether they are north or south, east or west of us. There are many seeds that actually deteriorate, unless occasionally renewed from abroad. It is for the interest of the county societies to favor such an Institution; and what other position can compare with our populous emporium?

The account of the premiums awarded at the Fifteenth Annual Fair, is marked F. Though the premiums have been less in number and value than they should have been, they probably, for the last eight years, exceed those of any other, if not all other, institutions in our State. From the small amount collected from members, viz: three dollars admission fee, and annual dues only two dollars, added to twenty-five cents contributed by a small proportion of those who have visited the Fairs, it will be seen that more than four thousand premiums have been awarded and distributed. After covering the necessary expenses for giving publicity to the celebrations, rent of the premises, and fitting up steam apparatus for testing machinery, and expenses of the repository, library, &c., and other expenses indispensable to carry out the Fairs, (all conducted with rigid economy,) every dollar remaining has been distributed *bona fide* in premiums, without any condition, among meritorious exhibitors. These premiums were well known to be the diffusive motives to ingenuity and improvements—unquestionably the most economical stimulants for industry and skill ever devised—that have brought together at a single anniversary seventeen thousand articles, the bulk of them highly wrought, many bearing the impress of the most delicate touches of art, by numberless hands; for in all the varied processes required, from the preparations of the raw material to the final finish, even of some single article, an hundred hands may be employed.

"State bounties have no doubt done good by their general influences; but premiums point more directly to individual merit; they rouse pride and ambition—passions which often operate with more power than even interest." The Trustees would respectfully suggest to the Legislature, the policy of enlarging the fund for agricultural premiums, where they are satisfied of their fair and faithful application—especially to the American Institute, whose sphere of operations is not limited to a single county or State, but embraces every State in the Union, and is, by its charter, constituted a National Institute, and expected to distribute premiums for meritorious productions over the whole country. The amount bestowed on agriculture at the Fifteenth Fair, though the Managers, in their endeavors to do justice, encroached on the other departments, still falls greatly short of what the magnitude of that great interest required from an institution under the patronage of the Empire State, and professedly intended to afford encouragement to the whole agriculture of the country.

The Legislature have not been sparing in their bounties to our scientific institutions, our Universities and Colleges, for the promotion of science, all of which are useful; much of which is abstract, and has only an indirect influence, often very remote, on the comforts of a large portion of society; while comparatively little is done for an institution whose operations are continually increasing and perfecting those necessaries and comforts in which the whole mass of our fellow citizens are daily and hourly directly interested. The complaint is not that too much is expended for theoretical knowledge, but that too little in proportion is done for practical science, for agriculture and the arts, which continually come home to every family and individual, and are requisite to their enjoyments and even existence.

A new regulation was introduced into the horticultural department the last season. Instead of naming a particular day for bringing flowers for competition, and dispensing the premiums accordingly, inducements were held out for daily supplies, which prevented the falling off experienced before, when the day for deciding on the premiums was past; by this new regulation, every day brought a bountiful supply of fresh flowers, and a continued interest was kept alive during the whole of the exhibition; which, with the agricultural productions, garden vegetables, fruit, &c. made the Horticultural

Room the favorite room of the Fair. This we have learned by experience.

The plan of distributing books on agriculture, as premiums, adopted at the Fair before last, has been extended. They answer every purpose as testimonials of merit. They are so selected as to carry with them appropriate and useful instruction, which will be more or less diffused by their distribution. Beside, the sale of these valuable works is increased by the purchases required for premiums; in addition to which, their selection for the purpose of premiums by competent agriculturists, is the best recommendation of their merit, and they, by these means, are most extensively and favorably brought to the notice of the public. It operates intrinsically as a premium to the authors of valuable American publications on agriculture, gardening, &c. as well as to the exhibitor to whom they are awarded, as they are known to be selected for the purposes of premium on account of the high estimation in which they are held by competent judges acquainted with their contents.

The report of the Managers of the Fifteenth Annual Fair by their chairman, John Campbell, (marked G.) is in accordance with former usage; and read at a stated meeting. It contains among other things a summary of the receipts and expenditures; premiums; comparative statement of receipts and expenditures of the Annual Fairs for eight years, and excess of receipts over expenditures for the same time, with remarks; improvements in conducting the Cattle show, for the benefit of exhibitors; the plowing exhibition; horticultural department; seeds for gratuitious distribution; blowing up of a ship by Colt's submarine battery; Francis' life boat; Morse's magnetic telegraph; boat races, &c.; receipts and expenditures of the same; remarks on looking for a suitable place to hold our future Fairs; a spacious edifice required belonging to the Institute; a depository of information for farmers, with all the useful varieties of machines and implements in husbandry, "and all the complications of machinery connected with the mechanic arts." Duplicates of Patent-Office inventions, with libraries and reading rooms, and permanent and suitable accommodations for holding the annual Fairs—not visionary, when it is considered that the American Institute from nothing, has attained to what it now is.

Document marked H. contains an extended account of the whole expenditures of the Fifteenth Fair and of the repository, library, &c. which includes the whole expenditures of the last year. A general summary of the whole receipts and expenditures for the year, with the balance, are as follows, the vouchers for which, are all on file.

The receipts and expenditures have been as follows:

RECEIPTS.

Amount received from sales of tickets at the Fifteenth Annual Fair, 1842,	$6,196 75
Amount received at Cattle Exhibition,	172 00
Amount received at Castle Garden, being one-half the proceeds taken at the Nautical Exhibition,	373 00
Amount contributed by members,	977 00
Amount from Comptroller of the State of New-York, under act of May, 1841,	950 00
Amount on hand at the date of the last Report,	217 15
Total,	$8,885 90

EXPENDITURES.

(*For a detailed account*, *see statement* H.)

Fifteenth Annual Fair, 1842,	$5,825 75	
Repository of the American Institute,	2,899 12	
		8,724 87
Balance on hand,		$161 03

The Anniversary Address, marked I. was delivered by the Hon. H. G. O. Colby of Massachusetts, and is one among seventeen addresses which were delivered to crowded audiences during the Fifteenth Fair. His subject is one of universal interest, and is discussed with eminent ability.

Since the last Fair, the Repository has been devoted two months gratuitously to the exhibition of a machine, showing in much perfection the magnitudes, distances, and movements of the heavenly bodies. It is called a Planetarium, or Orrery, invented by Mr. I. Russell of Columbus, Ohio. This has been accompanied with lectures and explanations. Many thousands have attended, and examined its intricate and complicated construction greatly to their satisfaction.

The youths of public and private schools have also attended, and heard the explanations of the scientific Professors, and thus laid a lasting foundation for an accurate understanding of that ennobling science, the science of Astronomy.

It has been a favorite object of the Institute for some time past, to establish a Reading-room, embracing the leading periodicals, and other publications relating to the latest improvements of this country and some of the principal kingdoms of Europe: to be open at all times free to strangers visiting our city. The continual inquiries made for publications of this description at the Repository, first suggested the propriety and utility of such an establishment. It was ascertained, by extending a floor across from the side galleries of the Repository, heretofore rented of the city corporation at a rent of four hundred dollars per annum, that a large, convenient, and well adapted room might be provided, central and every way calculated for the purpose. A petition was presented to the Mayor and Common Council of the city, for the privilege of fitting up and occupying the room and its appurtenances for the purpose of a Reading-room, for ten years free of rent. It was referred to a standing committee of both boards, and after a full hearing a joint committee composed of the standing committees of the two boards, reported in its favor, as follows:

" The Joint Committee on Public Offices and Repairs, to whom was referred the petition of the Trustees of the American Institute, for a lease of ten years of the ' room and appurtenances now occupied by them,' would respectfully present the following Report:

That a special committee of the American Institute appeared before your committee in reference to their application, who represented fully and at large the manifold advantages already resulting from the well directed efforts of the Institute, for the protection and encouragement of American Industry.

Indeed, your committee are satisfied that the claims of this institution are such as deserve general and universal encouragement, while they feel impressed with the belief that an association, extending, as this does, its benefits and influence to every quarter of our widely spread territory, at once gladdening the heart and sustaining the arm of ingenuity and enterprise, recommends itself to the interests of our city and her citizens, and prefers a special claim to the patronage and support of our municipal strength.

Besides many interesting facts presented in the petition of the American Institute, and to which your committee do not hesitate to give their unqualified assent, other suggestions have presented themselves to the consideration of the committee.

As its style of incorporation implies, the American Institute is an offspring peculiarly our own. It is American in its character, and American in its feelings—divesting itself at the same time of any local or sectional feelings, while holding itself aloof from the bitter strife of party politics. It was fostered and cherished in the city of our birth and our adoption, while it imparts a vigor and influence through every sphere of labor and enterprise.

It appears from their memorial to the Common Council, that the American Institute was incorporated in the year 1829, and consequently under its act of incorporation has been in successful operation for a period of about fourteen years.

That time elapsed, has not failed to convince even the least observant that its sphere of usefulness as an association has been felt and appreciated beyond a parallel: building itself up, as it were, from the few feeble fabrics which then surrounded it, and divesting itself of that narrow and sordid spirit which appears to be a characteristic of too many of our public institutions, it has gradually found its way to an envied and an honorable fame.

In the progress of its efforts, it has caused the husbandman to seek new pleasures in his attention to his fields and his garners; it has added an impetus to a thousand occupations; it has given influence to our commerce, and aided to increase the renown long attached to the beauty of model and perfection of workmanship of every species of floating vessels.

It has taken by the hand the man of ingenuity, and has succeeded in placing him in a proper position before the world, while it has exhibited in prominent colors, that our country possesses the material which, if properly wrought upon, has the power and skill of competing with, and even excelling, the older and more advanced productions of the countries of enlightened Europe.

If we begin at home, we find its influence extending to the shop of every species of mechanical operation, while, farther away, we observe it putting in motion the plow, the mill, and the factory.

Here, under its influence, the blazing furnace is wielding the rough iron with admirable facility, and supplying demands for useful and ponderous machinery, while, there, the encouragement and protection afforded to our cotton, woollen, cloth, carpet, and other equally valuablemanufactories, are so many evidences of the triumphant success and encouragement of domestic manufactures.

This association has an undoubted influence in causing the true merit of labor to be appreciated and sustained, consistent with the progress of civilization and humanity; and while a premium or a diploma is granted by them, there is ample reason for supposing that it is not at the expense of that system of cruelty now pursued in the factories and work-shops of many portions of Europe. Fortunately for the credit of our land, we sustain no prison-houses, where the poor and unfortunate are ground to the dust, where time is robbed of its legitimate value, where industry is underrated, and where premature old age is the harshness of the penalty. The feelings of philanthropy are yet cherished in our manufactories, and the administration of our government is happily such, that the monopolist and the tyrant exercise but a limited sway; and *protection* in this instance, as in all others, is found to manifest its soothing influence.

If we are disposed to make but a comparison with our beautiful buildings, which characterize the industry of the mechanic of the present day, we discover a pleasing and an enviable contrast with the ruder and more costly edifices which were regarded as ornamental some few years since. They are, in truth, a manifestation of the sleepless and energetic spirit of improvement, and an index to the freedom and encouragment of native workmanship.

The fever which has so long raged in our principal cities, for the encouragement of foreign importations, is gradually, and it is to be hoped forever, subsiding, while the ridiculous pride which may have prompted the few to imitate the manners and appearance of the exquisite and the knave from abroad, is concealing itself in shame; and that true sentiment of refinement, which springs from the protection of our national industry, is rapidly assuming its native bold position.

Indeed, our countrymen are arousing themselves on all sides to the necessity of elevating American skill and invention, and true merit is securing a favorable position among the advocates of ingenuity and enterprize.

Your Committee might proceed to illustrate numerous instances of the progress and success of native talent, were it not that they find themselves compelled to adhere to the stricter meaning and intentions of their report.

The object of the American Institute, as will be more readily seen by reference to their application in requesting so long a lease, is not only with the view of being confident of a permanent location, without the risk of being compelled to remove from year to year, but to expend on their own account a sum sufficient to make their Repository and Reading-room a more convenient place of resort for the citizen and the stranger, and to improve a place, already open, for the exhibition "of models, machines, specimens of art, invention and discovery."

It will thus be observed that the room now occupied by the American Institute is otherwise of comparatively doubtful utility for city purposes, and yet is of infinite importance to the valuable association who now request its further use from our bounty.

Apart from these considerations, it is well enough to remember, that at their anniversary exhibitions, large numbers of strangers find an interest which induces them to visit our city, which must have an effect in elevating its position, proportionably with, and consequent to, an increase in the scale of its wealth and resources.

As a further confirmation of these assertions, the following extract from one of the members of the association is not without its interest; he says, "Suppose the transactions of the Institute bring to the city only twenty-five thousand people, and they average in their expenditures only two dollars each at the hotels, this will give to fifty hotels one thousand dollars each, which would be an important sum when they come to pay their rent. It is calculated that over twenty-five per cent of the rents *actually collected* go for taxes; is it not therefore important to the city that the lessees have the means of paying?—otherwise, how could our landlords pay their taxes? The purchases of merchandize benefit another class—the merchants; and in turn enables them to pay their rents.'

These conclusions are irresistible, and deserve a particular notice.

The late Annual Fair of the American Institute is supposed to have been visited by about 250,000 persons, which is a powerful indication, (apart from private interests,) of the manifestation of public opinion.

It is further supposed, that at that Fair about 17,000 articles were exhibited; and the immensity of labor and the large number of men evidently employed in their construction, is a calculation which your committee are at present compelled to leave unsettled. Of these articles—some superior, many inferior, some useful, and others not sufficiently advanced to merit competition—the large and generous number of 644 premiums were awarded, consisting of gold and silver medals, silver cups, works on agriculture, botany, chemistry, &c. &c. including diplomas.

The awarding of these articles necessarily involves a liberal expenditure of money, and the heavy expenses of the Institute in procuring and arranging miscellaneous fixtures, places and appurtenances attendant on their varied exhibitions, materially reduces the amount which it would be supposed should be received from visiters attending such exhibitions.

That the committee may not be misunderstood, they take the liberty of inviting attention to the following statement, which was placed in their possession by one of the Trustees of the Institute, and relates to the year 1841.

EXPENDITURE

For keeping open the Repository of the American Institute, for the daily display of new machinery, and the Library, free of expense to strangers, visiters, &c. &c. from March 31, 1841, *to March* 31, 1842.

Salary of superintending agent,	$1000 00
Clerk and messenger,	871 50
Recording secretary,	126 00
Carried forward,	1,997 50

Brought forward,	$1,097 51
Expense of agricultural address,	29 76
Printing addresses, catalogue of library, circulars, &c...	213 94
Newspaper advertisements,	42 20
Stationery, $29.14; periodicals for library, $32,	61 14
Binding books for library,	21 37
Fuel and light,	118 89
Transparencies for lectures,	6 50
Rent of premises for Repository, petty expenses, repairs, &c.	786 11
Painting and cleaning,	184 97
	$3,462 38

STATEMENT.

Amount received from sales of tickets at the Fourteenth Fair, 1841,		$7,050 00
Contributed,		1,110 50
Comptroller State of New-York, under act of May,		950 00
		$9,110 50
Expenditure of Fourteentn Fair,	$5,430 97	
do Repository,,	3,462 38	
		8,893 35
Leaving a balance of		$217 15

To carry out the objects of the Institute.

Ceaseless and untiring in its efforts, the American Institute now present themselves before the common council of our city for the use of the rooms now occupied by them in the Park, that they may more diligently proceed in advancing the noble designs contemplated in their constitution, and in voluntarily promoting the cause of industry, and the happiness of an extended and increasing number of our fellow-citizens.

With the belief, therefore, that our city will be enriched by the act, the committee concur in recommnnding that the prayer of the petitioners be granted, and would offer the following resolution:

Resolved, That a lease of ten years be granted to the American Institute of the ‘room and appurtenances’ now occupied by that association: provided, that their ‘reading room shall be thrown open to non-residents visiting our city, free of expense at all times,' and such other considerations complied with as are suggested in their petition to the common council.

CALVIN BALIS,
RICHARD F. CARMAN,
JOHN STEWART,
HARMAN C. WESTERVELT,
JAMES NASH,
WALTER MEAD,
Committee on Public Offices and Repairs."

February 1, 1843.

The closing resolution passed both boards unanimously, with only a single amendment, "unless wanted for the public use." The trustees refer with pride to this honorable testimonial in favor of the American Institute, so fully and powerfully set forth by the fathers of the city in this accepted report, more especially as like all other useful establishments, even the American Institute has not at all times and altogether escaped detraction, the lurking malign influences of which, if any remain, such manifestations of confidence from such unquestionable authority will most effectually counteract. Beside the confidence which this able report inspires in the Institute, by securing public favor, on which its very existence always has and always must depend; and without which, every effort to sustain it would be utterly hopeless; the release from rent at this time brings with it timely and substantial benefits, and will materially assist in carrying out most useful undertakings, which will compensate the city tenfold, and likewise extend their benign influences to the country.

Estimates of the requisite alterations for the library have already been obtained, and arrangements are making for procuring the best periodicals of this country and of England, Scotland, France and Germany, embracing agriculture and the arts, new discoveries and improvements, and open every day in the week, free to every stranger who may hereafter visit the city from any part of the world. Who will not second such an enterprise, that our city may contain one institution framed on the liberal principles of those so celebrated in Paris, where every stranger is welcomed. Those conversant with the periodicals of the countries named, are aware that they contain the essence of all modern improvements and discoveries. Arrangements will be made to translate the most important facts of those publications which are printed in foreign languages, that they may early become available to our inquiring, ingenious and inventive fellow-citizens. It is the desire also to procure drawings and models of useful labor-saving machines, that our country may not fall behind in the race of improvements. The native ingenuity and aptitude of our citizens for applying new discovered principles, and constructing and working labor-saving machines by the powers of nature, whereby not only the heavy drudgery of labor is performed without hands, but even the finest work is accomplished. These peculiar qualifications, when fully brought to bear on the varied, rich and boundless materials which are in our possession, united with the knowledge it is in our power to obtain, cannot fail to make our triumph complete in the competition of nations. "Get knowledge," the watchword of our great competitor (England) must be the watchword of America. Millions (in the countries referred to) are expended in experiments. The results of all these costly trials may be ready for perusal as soon as steam can bring them across the Atlantic.

Would that the American Institute could reach, with England's watchword, "Get knowledge," the ear of every farmer in the country, and in a tone that would not be forgotten. They might, a very few years since, within a few hours' sail from this city, have found barren land, which the owner would readily have sold for five dollars per acre, which now cannot be bought for one hundred. The transforming influence of marl has done this, which had been for centuries just as near as it is now, but viewed as useless; the benefits of which might have been enjoyed by those who have gone before us, generation after generation, had there been a single man possessing the merest smattering of chemistry to have pointed it out.

One-half the team employed by our forefathers is now dispensed with by the modern improved plow.

The early inhabitants of Massachusetts required a stipulation from the master mechanics' not to feed their apprentices with potatoes, because they deemed them noxious; knowledge has proved them nutritious and healthy. They now probably sustain a larger portion of human beings in Christendom than even bread, once deemed the "staff of life."

Our raking and threshing machines have lessened labor one-half. The statistics of markets show that the average weight of cattle is constantly increasing. This is evidenced by prize cattle, which a century ago were only about half the weight of the prize cattle of the present day. The agriculturist may profit by the examples of the mechanic and manufacturer. Their zeal for knowledge and perseverance in improvements, have multiplied their productions ten-fold, whilst the general improvements in farming have advanced with a very tardy pace. Every mechanical improvement is watched and adopted, while among many, knowledge and improvement in husbandry are yet sneered at as impracticable and visionary.

Something is wanted to induce a free intercourse among our intelligent farmers, to which their scattered condition and confining occupation is a natural hindrance. It is in contemplation to form a Farmers' Club, provided with a suitable place for regular monthly meetings, between certain hours of the day, where both city and country farmers may come together and freely receive and communicate information. As our city is continually the resort of farmers from this and other States, these social meetings, no doubt, would be well attended. Information will thus be collected easily and naturally from all parts of the country, and as easily and naturally diffused. The influences of these clubs have been eminently favorable in other places. By these means, much useful agricultural knowledge has been spread before the public. Such a club, under the auspices of the American Institute in the city of New-York, cannot fail of success. Its general effects would be favorable to the multiplication of valuable acquaintances and friends, and forming mutual friendships between city and country agricultural gentlemen, and thus tend to counteract those jealousies which sometimes exist between populous cities and the country, and teach both what will continue to be an everlasting truth, that their great and essential interests are one and the same. At all times, every day in the year, farmers will be welcomed at the Repository of the Institute, with the reading room of modern periodicals, as already described, open for their use. It is also the design of the Institute to make large additions to the agricultural part of their present library, so that the agricultural books will in themselves form a complete library for the farmer, consisting of the best publications extant, ancient and modern, ready for reference and reading. It is lamentable that this great interest, which constitutes two-thirds of our population, whose physical and political strength is paramount to all other interests combined, has not heretofore engaged sufficient attention to form one such complete library in our whole country. The farmer has been deemed undeserving of a participation in those rich and never failing fountains of intelligence and wisdom. But an awakening spirit has gone forth, carrying with it the conviction that the lights of science are as essential to agriculture as to the arts; and ere long, science will be hailed from the farm and plantation, with an enthusiasm as warm as from the workshop and the factory.

In conclusion, the Trustees most respectfully submit this report, in the full confidence that so long as the doings of the American Institute are so conducted as to deserve approbation, the countenance and favor of the Legislature will not be withheld.

By order.

JAMES TALLMADGE, *President.*
T. B. WAKEMAN, *Suprintending Agent.*
GURDON S. LEEDS, *Secretary.*

New-York, *April* 5, 1843.

DOCUMENTS

Accompanying the Report of the American Institute.

A. Trustees, Managers of the Fifteenth Annual Fair, and Board of Agriculture, and two circulars issued by them.

B. Judges of the Fifteenth Annual Fair.

C. Reports of Judges on Horticulture, Field Crops, Agricultural Productions, Improved breeds of Cattle, Native Stock, Horses, Sheep, Swine, Dairy Products, Raw and Manufactured Silk, Silk Machinery.

D. Communications from contributors, viz: Modes of cultivating Wheat, Egyptian Wheat, Dutton Corn, White Indian Corn, Apples, Grapes, Pumpkins, Melons, Celery, Culinary Vegetables, Cabbages, Butter, Cheese, American Salt, Tibbit's manner of raising Pigs, Description of Botts' Straw Cutter, communication from Professor Mapes on Corn Stalk Sugar.

E. List of Cattle, Horses, Sheep, &c. exhibited at the Fifteenth Annual Fair, with pedigree.

F. Premiums awarded at the Fifteenth Annual Fair, together with a list of the Premiums awarded each year, from 1835 to 1842.

G. Report of the Board of Managers of the Fifteenth Annual Fair.

H. Expenditures of the Fifteenth Annual Fair, and of the Repository of the Institute, for the year ending March 31st, 1843.

I. Address of the Hon. H. G. O. Colby of Massachusetts.

(A.)

TRUSTEES OF THE AMERICAN INSTITUTE.

James Tallmadge, *President.*
Adnoiram Chandler, William Inglis, John Travers, } *Vice Presidents.*
T. B. Wakeman, *Corresponding Secretary.*
G. J. Leeds, *Recording Secretary.*
E. T. Backhouse, *Acting Treasurer.*

Board of Managers of the Fifteenth Annual Fair.

City of New-York.—John Campbell, Adoniram Chandler, Edward R. Backhouse, Wm. P. Disosway, Martin E. Thompson, Alfred Stillman, George F. Hopkins, Joseph Torrey, Joseph Curtis, Clarkson Crolius, Augustus Fleming, Geo. C. De Kay, James Van Norden, William Hall, Edward Field, Gurdon J. Leeds, Joseph Cowden, George Endicott, Robert Lovett, Addington D. Frye, Isaac M. Phyfe, Alexander Lawrence, R. M. Hoe, S. S. Bowman, Geo. F. Barnard.

Auxiliary Managers for the country.

Kings County.—William Conselyea, Alden Spooner, Eli Gilbert, Cornelius Bergen, Rosewell Graves.

Dutchess County.—M. Vassar, R. S. Livingston, Henry Concklin.

Ulster County.—Jas. N. Mitchell, Edmund Bruyn, Abraham Deyo.

Columbia County.—Edward P. Livingston, Wm. B. Ludlow, Jonathan Stott, Cyrus Curtis.

Westchester County.—Jas. A. Hamilton.

Orange County.—N. Jones, Gilbert O. Fowler, Joel Wheeler.

Sullivan County.—Jas. C. Curtis.

Delaware County.—Martin Keeler, Noah Dimmick.

City and County of Albany.—E. P. Prentice, Archibald McIntyre, Caleb N. Bement, John P. Veeder, Luther Tucker.

Rensselaer County.—Geo. Tibbitts, Benjamin Marshall, John Sampson, Richard P. Hart, Alexander Walsh, Henry Burden, H. D. Grove, Amos Briggs.

Tompkins County.—Charles Humphrey, E. S. Cornell, Levi Hubbell.

Oneida County.—Jesse W. Doolittle, Wm. S. Walcott, S. Newton Dexter, Charles P. Kirtland, John H. Ostrom.

SARATOGA COUNTY.—Geo. W. Hall, —— Spooner.

ONTARIO COUNTY.—John Greig, Charles Seymour, Robert L. Rose.

MONROE COUNTY.—E. F. Smith, Jonathan Childs, Charles M. Lee, Henry O'Reilly, Frederick Starr.

CHAUTAUQUE COUNTY.—Lester Bradner.

ONONDAGA COUNTY.—Elijah Rhoades, Thomas Spencer, Geo. Geddes.

ST. LAWRENCE COUNTY.—Anthony C. Brown, James G. Hopkins.

LIVINGSTON COUNTY.—G. W. Patterson.

FULTON COUNTY.—J. G. Ward.

YATES COUNTY.—C. Masten.

ERIE COUNTY.—Lewis F. Allen.

NIAGARA COUNTY.—Peter B. Porter, Jr.

GREENE COUNTY.—A. Van Bergen, T. B. Cooke.

HARTFORD & WINDSOR, Ct.—Philip Ripley, Hezekiah King, J. B. Colt, Martin Ellsworth.

NORWICH, Ct.—Calvin Goddard, J. G. W. Trumbull, Wm. C. Gilman, John Breed.

NEW-HAVEN, Ct.—Henry Whitney, James Brewster, Wm. K. Townsend.

BRIDGPORT, Ct .—Lemuel Coleman.

PROVIDENCE, R. I.—James J. Simmons, Wm. Rhodes, Amasa Sprague, Philip Allen.

JERSEY CITY & HOBOKEN, N. J.—David Henderson, Francis Price.

NEWARK, N. J.—Wm. E. Layton, James Miller, Peter Duryea, Ira Merchant.

BELLEVILLE, N. J.—George Bird, Joseph Kingsland.

PATTERSON, N. J.—John Colt, Abraham Godwin.

Board of Agriculture.

Jeremiah Johnson, Brooklyn, L. I.; Chas. Henry Hall, Harlaem, N. Y.; Thomas Addis Emmet, Harlaem, N. Y.; Francis Price, Weehawken, N. J.; Henry Whitney, New-Haven, Conn.; Nicholas Wyckoff, Bushwick, L. I.; Abraham Bell, New-York; John O. Choules, New-York; John A. Pool, New-Brunswick, N. J.; Edward Clark, New-York; Thomas Bridgeman, New-York; E. P. Prentice, Albany, N. Y.; Alexander Walsh, Lansingburgh, N. Y.; A. J. Downing, Newburgh, N. Y.; Samuel Stephens, New-York; Samuel Walker, Roxbury, Mass.; W. J. Townsend, Astoria, N. Y.; J. C. Thompson, Tompkinsville, S. I.; Isaac M. Phyfe, New-York.

(B.)

For Document B., containing a list of the judges, &c. of the Fifteenth Annual Fair, see Documents on file with the Clerk of the Senate.

(C.)

AGRICULTURAL REPORTS.

Report of the Committee on Horticulture.

The committee on Horticulture, in conjunction with the Agricultural Board of the American Institute, in adverting to the various productions in these respective branches, exhibited in the Horticultural Room of the Fifteenth Annual Fair, respectfully report:

The committee feel a high sense of gratification in having witnessed the rich and splendid specimens of flowers, fruits, vegetables, agricultural and dairy products, garden ornaments, implements, paintings, &c., forwarded by contributors to this their Fifteenth Annual Fair, where all have done well. Difficult has been the task to draw the critical line of distinction, and to distribute the rewards due to a fair and honorable competition. It has been the governing rule of the committee to keep the scales in "equal poise," and to administer equal justice to all, by a full and uniform representation of every exhibitor.

The committee cannot but flatter themselves that this truly republican principle has been fully and fairly carried out in their decisions. Every act that may savor of partiality has been studiously avoided. Invidious distinctions have been disclaimed, and as a necessary compliment, your committee rejoice to see the strong unanimity, the good fellowship, the warm patriotism manifested by the TILLERS OF THE SOIL on this interesting and important occasion. They have come forward in one firm phalanx, to lay the fruits of their experience and industry on the altar of American industry. "Every man has done his duty."

The numerical order of adjudication has been abolished, as it was too apt to engender feelings of dissatisfaction, and to deter individuals in future, from forwarding articles for exhibition. It is impossible, perhaps, to convince a person who does not stand as *number one*, that he has not been slighted; and that his products, weighing all the circumstances, have met with a just decision. At the present anniversary prizes have been adjudged to a great majority of contributors, as a mark that whoever has aided in the development of a nation's resources, shall carry home some memento of what he has done for his "country's good."

The committee, in the discharge of the duties assigned them, cannot but feel an honest pride in having witnessed the delight and satisfaction imparted to the ten thousand inquiring minds that have been led to the American Institute by the spirit of patriotism and a laudable curiosity. They feel convinced, that by energetic and good management, the whole community may be awakened to the vast importance and utility of those annual Fairs. By their encouragement, generous feelings of independence are fostered, and the invaluable knowledge disseminated throughout this great and flourishing republic, that "perfect agriculture is the true foundation of all trade and industry, and that it is the source of the riches of States."

In the language of the report of the New-Haven Horticultural Fair, lately celebrated, "We hope the time is not distant, when exhibitions of this kind will become common in all our towns and villages, and take the place of shows, which abstract large sums of money from the pockets of our citizens, without rendering them any equivalent. Agricultural and horticultural exhibitions are calculated not only to stimulate to greater industry and skill in the culture of the soil, but we believe the effect on the moral feelings is exceedingly happy. That person must be destitute of all generous feelings, who could view the products of our fields and gardens, as exhibited at this Fair, without having his bosom glow with adoring and grateful emotions towards the Lord of the harvest, who crowneth the year with goodness, and whose path drops fatness, who adorns the lily of the field, and who clothes the pastures with flocks, and covereth the valleys over with corn," making them "shout for joy, and also sing."

The several committees of judges, in all their respective departments, having furnished to the Managers of the American Institute distinct reports on such subjects as came under their supervision, it devolves on this committee to report on the survey of standing crops, made under the direction of the Managers, at the following dates:—

On the eighth day of September, 1842, your chairman, accompanied by Mr. Jeremiah Johnson, chairman of the agricultural committee, Mr. Nicholas Wyckoff, Mr. W. J. Townsend, and Mr. J. Hopkins, examined a field of cabbages of about twenty acres, comprising part of the farm of Mr. Lambert Wyckoff, at Bushwick, Long-Island. The plants having been set about three feet apart early in the spring, had arrived to good maturity; and although a great proportion of the crop had been sent to market, that part which remained was uniformly in fine condition. A dozen cabbages was selected from less than an acre of land, the average weight of which was twenty-four pounds nine ounces and a quarter. On perambulating the farm, a bed of the red pickling cabbage was presented to our view, from which we selected half a dozen heads, the average weight of which was twelve pounds nine and a quarter ounces, being one-third more than the usual weight of this description of cabbage. These crops reflect great credit on the gardener, Mr. Peter Hultz, who is an adept in the culture of Cabbages, he having been eminently successful in producing superior crops during the last two or three years.

On the 23d of September, 1842, your committee visited by invitation, the farm of Garret Vreeland, New-Jersey, where we found on about three acres of land, a crop of cabbages in a medium stage of growth, which bid fair to arrive at full perfection by the month of November, which is the ordinary time of gathering them for market. It may be here remarked, that the land in this section of country is of very rich and fertile quality, being literally embedded with the shells of oysters. So congenial is the soil to the growth of cabbage, that the roots of this plant are seldom attacked by insects, which prove so destructive in less favored situations. Hence, perpetual, vigorous and healthy crops are gathered from the same beds, arising from the great quantity of nutritious matter, mingled in the earth by remote causes. The plan generally adopted, is to plant a little over two feet apart, by which means they produce on the average, from eight to nine thousand cabbages per acre. In some parts of Long-Island, or in other sections where the land is less fertile than that of Hudson county, it is customary to plant cabbage about three feet apart, and to deposit a shovel full of animal manure in each hill; hence the result is a growth of heavier and larger heads, from the facility of expansion—though the greater number grown in the same space by the "Men of Bergen" will perhaps equal, if not exceed in weight the crops of their neighbors on Long-Island.

After surveying Mr. Vreeland's crop, we took a circuit of three miles around the southern part of Bergen township. In the course of this short ramble, not less than six hundred thousand heads of cabbages, fresh, vigorous and thriving, came within our view. A finer display in the same space could not perhaps be exhibited in any part of the world. We could not depart from the scene without heartily wishing health and prosperity to the independent cultivators of this excellent vegetable, which has long redounded to the fame of the Krout fraternity of Bergen, and furnished a most important and indispensable dish to the tables of every citizen in our great metropolis.

Subjoined are the names of the cultivators above alluded to.

	Acres.	Cabbages.
Garret Vreeland,........................	about 3	25,000
George Vreeland,........................	" 9	70,000
Jacob Vreeland,........................	" 3	25,000
John Vreeland,........................	over 1	10,000
Stephen Vreeland,........................	about 8	60,000
George Vreeland, Jr.	" 3	25,000
Carried forward,..................		

		Acres.	Cabbages.
Brought forward,			
Michael Vreeland,	about	3	25,000
John M. Vreeland,	"	2½	20,000
Henry Brinckerhoff,	"	2½	20,000
Cornelius Brinckerhoff,	"	1½	20,000
John Brinckerhoff,	"	2½	20,000
John Van Horn,	"	6	50,000
Mr. Prichard,	"	3	25,000
John J. Van Horn,	"	3	30,000
John G. Van Horn,	"	3½	30,000
Myndort Van Horn,	"	3½	30,000
John G. Van Horn, Jr.	"	2½	28,000
Myndort Vreeland,	"	2½	20,000
Abm. Vreeland,	"	3	25,000
Richard Vreeland,	"	2½	20,000
Jacob Stultz,	"	3	25,000
Abraham Post,	over	1	10,000
Mr. Bell,	about	2	15,000
Mr. Jackson,	"	2	15,000
Total—about,		77½	630,000

On the 20th of September, 1842, your committee visited the estate of Mr. John Jones, near Hurlgate, New-York, for the purpose of inspecting a field of Turneps. Your chairman having furnished the seed for this field on the first of August, being but seven weeks previous, was astonished at the perfection to which this crop had arrived. His associates were also delighted at the extraordinary regularity of their growth, the refreshing greenness of their tops, and, tempted to test their quality, pulled several of them from the earth, which averaged from ten to twelve inches in circumference, and were of a delicious flavor. Two pecks of these turneps were forwarded to the Horticultural Room October 8th, some of which measured eighteen inches in circumference. The grand secret of the prodigious growth, rested on the simple fact of their having been hoed out twice, and cultivated on the English principle. On the above occasion, we also visited a field of Indian Corn on this estate, which had been plowed through in the usual way, but had not undergone the operation of the hoe. It was in a state of great luxuriance, a great proportion of the stalks being from eight to ten feet in height. Samples of this corn were also forwarded by the proprietor to the Horticultural Room of the Institute, together with several fine specimens of culinary vegetables, viz: Potatoes, Onions, &c., which would entitle him to several distinct premiums, but in consideration of their not being entered for competition in distinct lots, the committee of judges on vegetables adjudged a silver medal, as a fitting reward for such eminent success in field culture.

The committee cannot close this report, without awarding their meed of unqualified praise to the disciples of Flora, both professional amateur, who by the rich displays of the beauties of nature, frequently replenished during the Fair, have rendered the Horticultural Room the center of attractions, which is eminently calculated to stimulate our fellow-citizens generally, to pursue that most healthy and enchanting of all recreations, the cultivation of Flowers, an employment which cannot fail to attach man to his home, and thus promote domestic happiness; and it is an indubitable fact, that he who delights in his home, and feels disposed to embellish it, will be likely to hasten to it when he has done his business abroad, instead of wasting his time in the pursuit of transient and dissolute pleasures, which lead too many of our race to disgrace, misery, and an untimely end.

THOMAS BRIDGEMAN, *Chairman.*
ALEXANDER WALSH,
NICHOLAS WYCKOFF,
EDWARD CLARK,
W. J. TOWNSEND,
J. C. THOMPSON,
Oct. 21*st*, 1842. ISAAC M. PHYFE.

Report on Field Crops.

The undersigned, appointed by the American Institute, to visit and decide upon the best Field Crops which have been entered for competition at its Fifteenth Annual Fair, report:

That they have performed that duty, and for the best field of corn have awarded the first premium of the American Institute to Frederick J. Betts, Esq., of Newburgh, N. Y.; and for the second best field of corn, they have awarded the second premium of the American Institute to Richard F. Carman, Esq., of Fort Washington, in the county of New-York.

For the best field of oats they have also awarded the first premium of the Institute to Frederick J. Betts, Esq., aforesaid.

In arriving at these decisions, in respect to the fields of corn, the undersigned were governed by a careful inspection of them; and in respect to the field of oats, which had been gathered some time previously to their visit, by the appearance of the soil, the promising crop of turneps which were growing amidst a second crop of oats, from the seed scattered during the harvest of the first crop; and by the statements of Mr. William Hughes, the farmer of Mr. Betts, on which, in respect to the quantity both of corn and oats, they, from the foregoing circumstances, place implicit confidence.

That the American Institute may, however, be informed of the data by which they have been guided, the undersigned deem it advisable to make extracts from the statements of Mr. Hughes, which have been verified by him under oath, before P. F. Hunn, Esq., J. P. of Newburgh, and the originals of which are now on file in the archives of the Institute. As these statements refer also to the treatment of the soil and culture of the crops, as well as the yield, they believe the public interests will be greatly subserved by the account of the manner and process practiced by Mr. Betts. The statement which refers to the corn, is as follows:

"The soil was a very tough greensward, having been several years laid down to grass and occupied for pasturage. From the 4th to the 8th of February last, the ground being then entirely free from frost, the whole field was thoroughly plowed. In the second week in May, two bushels of salt and fifteen wagon loads of manure per acre, were spread broadcast over the field, and it was then thoroughly cross-plowed and harrowed, and the corn was planted in hills, (the hills being between three and four feet apart,) each hill being covered with about half a shovel full of manure. The only subsequent cultivation was plowing and hoeing twice, and going once through it with the cultivator. On the 19th September, the corn was cut up close to the ground, and put up in shocks of an equal size upon the field; and as it is not yet husked, the only practicable mode of ascertaining the quantity of the product has been fairly and justly pursued by me, as follows, to wit: I have husked twelve of the shocks, from different parts of the field, taken indiscriminately, and averaged the whole crop according to the quantity produced from them, and find that the field, (containing by accurate measurement four acres, two roods, and twenty-three perches of land,) has produced nine hundred and fifty and two-thirds bushels of ears of corn; equal to two hundred and five and a half bushels of ears of corn per acre. As a portion of the field was injured by the frost in June last, the best acre, no doubt, exceeded in product the foregoing average."

And the statement which refers to the field of oats, is as follows: "The soil had, for many years previous to 1841, been laid down to grass, and the field occupied for pasturage. In the spring of last year, the field was planted in about equal proportion with potatoes and corn, and had then applied to it about twelve loads of manure, (a compost of muck and barn-yard manure,) per acre. About the 23d of April last, the field was well plowed, and the oats on the same day were sowed at the rate of three bushels to the acre, and were harrowed in, which was the only labor expended upon the field until the crop was harvested. An acre of the field was accurately measured, before the crop was harvested, and the grain therefrom has been kept and threshed by itself, and produced seventy-seven bushels of clean oats. The whole field contained about three and three-quarter acres, and the grain thereupon was about equally good throughout the whole of it."

In respect to the field of corn which belonged to Mr. Carman, the undersigned not finding that gentleman at home, are unable to give any of the details respecting its cultivation, except what they learned from a laborer who had assisted in working the field: that it had not received any extraordinary manuring or attention. They computed the product of this field, at eighty bushels of shelled corn to the acre. The farm of Mr. Carman appeared well arranged and in good condition, and merits particular notice.

But the undersigned cannot close this report without calling public attention to the judgment and good taste which Mr. Betts has displayed, in the irrigation and fertilization of the soil, the subdivisions of his farm into lots of convenient sizes, their entire exemption from vegetable excrescence, and to the neatness, order, and cleanliness which is presented in every department of his establishment. This farm contains about one hundred and twenty acres, and may, in the opinion of the undersigned, be referred to as a pattern farm, every way worthy of attention.

All which is respectfully submitted.

EDWARD CLARK,
MARTIN ELLSWORTH,
NICHOLAS WYCKOFF, } *Commmittee on Field Crops.*

New-York, October 22, 1842.

Report on Agricultural Productions.

The committee assembled October 22d, 1842, as judges on agricultural productions, exhibited in the Horticultural Room, at the Fifteenth Annual Fair of the American Institute, having attended to the duties assigned them, submit the following report, and unanimously recommend the premiums subjoined, to

No. 43, For forty ears of superior white Indian corn, 3 vols Cultivator.
43, For forty ears of superior yellow Indian corn, 3 vols. New Genesee Farmer.
47, For a bushel of white flint wheat, silver medal.
50, For superior specimens of Chinese corn, diploma.
5, For superior specimens of Dutton corn, diploma.
152, For superior specimens of Tuscarora corn, 1 vol. Cultivator.
147, For a bushel of superior oats, 3 vols. Cultivator.
110, For a bushel of superior buckwheat, Buel's Farmer's Comp.
9, For superior Egyptian wheat, diploma.
57, do do do

The committee cannot conclude this report without awarding their mead of unqualified approbation to the gentleman whose name stands opposite No. 29; he having exhibited samples of grain of very superior quality, comprising superior specimens of sweet table corn, and a sample of extra fine wheat. As we do not feel authorized to adjudge a valuable premium for small samples, we recommend that a diploma be filled up, containing a summary of the articles alluded to, as an honorable memento to the exhibitor. We are also constrained to admire some fine samples of wheat, containing eleven varieties, with oats, millet, canary bird seed, &c. which stands under No. 63, and recommend that the exhibitor be furnished with a diploma containing a list of the articles above enumerated, as an honorable memorial for his efforts in the cause of agriculture.

THOMAS BRIDGEMAN,
EDWARD CLARK,
MARTIN ELLSWORTH,
W. J. TOWNSEND, } *Judges.*

Report of the Judges on Improved Breeds of Cattle.

The undersigned having been appointed to examine and report upon the improved breeds of cattle, exhibited at the Fifteenth Annual Fair of the American Institute, and designate which, in their opinion, are entitled to the premiums offered, present the following report:

We found it difficult, in some instances, where shades of difference were so very slight, and among so large a number of superior animals, to decide, but in the progress of our duties we came to the unanimous conclusion that the following were the most worthy of the premiums offered.

To Mr. E. P. Prentice of Albany, for the two year old bull "Fairfax," first premium; gold medal.

To Mr. Henry Watson, for his two year old bull "Prince Hal," second premium; silver medal.

To Mr. Thos. Addis Emmett, for his one year old bull "Sir Temple," first premium; silver cup.

To Mr. S. W. West, of Long-Island, for his one year old bull "Prince of Fulton," second premium; silver medal.

To Mr. E. P. Prentice, Albany, for his bull calf "Cato," first premium; silver cup.

To Mr. William Gibbons, New-Jersey, for his bull calf "Avalon," second premium; silver medal.

For best cows, three years old and upwards, to E. P. Prentice of Albany, for his "Matilda," first premium; gold medal.

To Mr. E. P. Prentice, for his "Daisy," four years old, second premiums silver medal.

For best one year old heifer, to John A. Pool of New-Jersey, for his "Alderney," first premium; silver cup.

To John A. Pool, New-Jersey, for his one year old heifer "Louisa," second premium; silver medal.

For best heifer calves, to Effingham Lawrence of Flushing, L. I. for his heifer calf "Sally," first premium; silver cup.

To William Prince of Westchester, N. Y. for his heifer calf "Victoria," second premium; silver medal.

The committee would remark that, in consideration of the excellent qualities of Mr. C. P. Smith's imported cow No. 24, though without pedigree or certificate of breed, they recommend a discretionary premium of a silver medal.

M. H. RUGGLES,
BENJ. V. FRENCH, } *Judges.*
ROB'T WHITE, Jr.

Report of the Judges on Native Stock.

The committee on Native Stock having attended to the duties assigned, respectfully report as follows:

One brindle cow presented by Angus McDuffie of Sing-Sing, five years old, now in milk; weight in March, 1,910 pounds; present weight, 1,800 pounds; of the larger class of animals; average quantity of milk, twenty-eight quarts per day; grass fed, with the exception of a little swill from the house; of a breed highly to be appreciated; first premium, silver cup.

To the red cow presented by Josiah Purdy of Westchester, eight years old; of fine form; gives at the present time, twenty quarts of rich milk; grass fed solely; second premium, silver medal.

To the roan cow presented by George D. Small of New-Jersey, six years old; small in size, but of good qualities for a milch cow; with ordinary keeping as per statement of the owner, and in the opinion of your committee, merits a diploma.

There was also on the ground a white cow with a calf by her side, six weeks old; tinctured with the Herefordshire breed, with several good milking properties.

The bull "Red Boy," of deep cherry red, Durham and Devonshire intermixed, four years old; and in the opinion of your committee, well adapted to our dairies for stock; first premium, silver cup.

The bull calf four months old, remarkably full in every point, of a deep cherry red, presented by Bethuel Brocket of Connecticut; richly meriting a silver medal.

One pair working oxen presented by John Todd, North-Haven, Conn., deep cherry red, five years old, perfectly broke, we may well say, nearly so in action and looks; the weight of each, 1,605 and 1,600 pounds; first premium, gold medal.

One pair of working oxen presented by John B. Davis, six years old; superior in color to the five years old to which we have awarded the first premium; also greater in action and speed from length of limb and lightness of body, possessing in a high degree every property to be sought for in a pair of working cattle; well deserving the second premium; silver cup.

One pair of four year old steers or working cattle presented by John Hubbard of Guilford, Conn., which have drawn and backed an ox cart with 4,500 pounds stone at the New-Haven County Show; color fine red, with crooked face, of uncommon size; average girth of the pair, seven feet; of great promise for fancy work or the stall; third premium, silver cup.

One pair of twin steers presented by the above named person, very compact in form, of a rich color, hardly a shade inferior to the crooked face steers; to which we recommend a silver medal.

One pair three year old bulls of the Durham breed, presented by Wm. K. Townsend of East-Haven, Conn., well trained to the yoke, having done well the work of a heavy yoke of cattle during the past season, without in the least impairing them for the use for which they were intended; for which we highly recommend a silver medal.

In conclusion, your committee would say, that we are more than ever convinced of the great advantage to be derived from the intermixture of the foreign and native breeds of cattle, by happily uniting the good qualities of both, in color, form, size, and we might add, (which is of some importance for fancy,) without in the least detracting from their other good properties.

All which is respectfully submitted.

MARTIN ELLSWORTH,
PETER H. BRINK,
EFFINGHAM LAWRENCE,
E. WIGHT,
DANIEL WING,
Judges on Native Stock.

October 22d, 1842.

Report of the Judges on Horses.

The undersigned, to whom was delegated the duty of inspecting and of ascertaining the relative merits of the different horses which were entered for competition at the Fifteenth Fair of the American Institute, beg leave respectfully to report:

That after an earnest and impartial investigation of the claims of the rival candidates, taking into consideration their general symmetry of proportions, their size, blood, performance and promise, and their adaptation to the requirements of the community at large, they have, with entire unanimity, determined to recommend those hereinafter named, as eminently entitled to the honors annually awarded by the Institute.

In accordance with your instructions, your committee would therefore beg leave unanimously to recommend the following awards:

The first premium for " the best stud horse," to " *Abdallah*," the celebrated trotting stallion, by Mambrino, out of Amazonia, entered by John R. Snedecor, Jamaica, L. I.

The second premium to " the second best stud horse," to " *Raritan*," a fine thorough bred stallion, by Monmouth Eclipse, out of Indiana by Sir Archy, entered by Dr. J. A. Pool of New-Jersey.

The first premium for " the best brood mare," to " *Betsey Wilson*," (the dam of the celebrated Lady Clifden,) by Ratray, her dam by Ogle's Oscar, entered by Henry Watson of Connecticut.

The second premium for " the second best brood mare," to " *Iodine*," by Eclipse, out of Romp, entered by Effingham Lawrence of Flushing, L. I.

The premium for " the best colt, not exceeding two years old," to " *Logan*," by Henry Clay, out of Croppy, entered by George M. Patchen of Brooklyn, L. I.

The premium for the best jack, to " *Don Juan*," (imported from Spain,) entered by Dr. John A. Pool of New-Jersey.

In making the foregoing awards, your committee beg leave to state, that they have not been unmindful of the very strong claims preferred by several candidates for the honors of the Institute; and they would respectfully invite your attention to two entries of peculiar merit, in the hope that you may be pleased to extend to their owners the honor of a diploma, or some other mark of your consideration. With this view, your committee confidently recommend the following entries as worthy of any award the Institute may see fit to bestow: "*Walden*," a bay colt, three years old, by Young Wildair, dam by Mambrino, entered by Mr. John M. Kidd of Orange county, N. Y., and a bay filly, seventeen months old, by Tippecanoe, out of a Mambrino mare, entered by Mr. John Wilde of Bloomfield, N. J.

All which is respectfully submitted.

WILLIAM T. PORTER,
WILLIAM JONES, } *Judges on Horses.*
JAMES BATHGATE,

Report of the Judges on Sheep.

The undersigned, upon whom was devolved the duty of adjudging upon the relative merits of the sheep exhibited at the Fifteenth Annual Fair of the American Institute, beg leave to report:

That there were two distinct breeds presented to their consideration, the Long and Middle Wools; and believing that each is best for particular localities, they could not take upon themselves to decide between them, though nothing less seems to have been expected by your very respectable Board of Agriculture, since only single premiums are offered to excellence. But in this dilemma, the undersigned have ventured to examine the two classes by themselves, to select such of each as they deem to be the most perfect models, and to hope it will not be inconsistent for the Institute to give premiums on each, as follows, viz:

On Long Wool Bucks, first premium to William Pirnie; silver cup. Second premium to Charles Blackbourn; silver medal.

On Long Wool Ewes, first premium to Charles Blackbourn; silver cup. Second premium to William Pirnie; silver medal.

On Middle Wool Bucks, first premium to Obadiah Elliot, New-Jersey; silver cup. Second premium to Smith Cutter, New-Jersey; silver medal.

On Middle Wool Ewes, first premium to Smith Cutter of New-Jersey; silver cup.

On Middle Wool Lambs, first premium to Smith Cutter of New-Jersey; silver medal.

On Long Wool Lambs, first premium to Charles Blackbourn of Long-Island; silver medal.

The undersigned take pleasure in speaking in terms of high commendation of the South Down ewes belonging to Mr. William Dowden of New-Jersey, which, though not equal to those above designated, yet so nearly so as to have held their judgment a considerable time in suspense.

They regret that no fine wool sheep were offered; for while for particular purposes, they are persuaded none are more profitable to the farmer than those before mentioned, yet for others, they are just as well convinced the fine wools have a decided advantage. But they are more than willing to attribute their absence more to the fact that it is not contiguity to a market that gives it to them.

All of which is respectfully submitted.

E. P. PRENTICE,
J. McD. McINTYRE,
WILLIAM JONES,
} *Judges on Sheep.*

Report of the Judges on Swine.

The undersigned having been appointed to examine and report on the improved breeds of swine, exhibited at the Fifteenth Annual Fair of the American Institute, respectfully report, viz:

To No. 22, a boar seven months old of the Columbia breed, presented by H. W. Tibbits of Yonkers, N. Y., first premium; silver cup.

To No. 19, a boar twenty months old of the Berkshire breed, presented by Charles Star, Jr. of Mendham, Morris co. N. J., second premium; a diploma.

To No. 20, a Berkshire sow two years old, presented by Charles Starr, Jr. of Mendham, Morris co. N. J., first premium; a silver cup.

To No. 18, a Hampshire sow eighteen months old, presented by William Love of Bloomingdale, N. Y., second premium; a diploma.

To No. 23, a shoat seven months old of the Columbia breed, presented by H. W. Tibbitts, Yonkers, N. Y., a diploma.

The committee recommend a discretionary premium, to be awarded to No. 9, a sow of the Berkshire breed. Also to the four fat hogs, presented by R. T. Aitkin; and to No. 6, a Berkshire sow seventeen months old, with a litter of eight fine pigs.

All which is respectfully submitted.

R. A. DE RUSSY,
Wm. K. TOWNSEND,
BETHUEL BROCKETT,
STEPHEN YATES,
} *Judges. on Swine.*

October 19*th*, 1842.

Report of the Judges on Dairy Products.

The committee on dairy products exhibited at the Fifteenth Annual Fair of the American Institute, report:

That they have examined the several lots of butter and cheese exhibited, and recommend

That the first premium on butter, be awarded to lot No. 118, made and exhibited by Mr. Stephen Yates of Palatine, N. Y.

That the second premium on butter, be awarded to Mr. John A. Smith of Orange county, N. Y.

The tub of butter presented by Mr. H. W. Strong of Orange county, was considered fully equal to any exhibited; but the quantity was not sufficient to entitle it to a premium; but the committee recommend a diploma to be given to Mr. Strong.

The committee recommend the first premium on cheese, to be awarded to the lot presented by Mr. S. Perry of New-York.

The second premium on cheese, to be awarded to the lot exhibited by Mr. A. B. Ludlam of New-York.

All which is respectfully submitted.

LUTHER TUCKER,
ALEXANDER WALSH, } *Judges on Dairy Products.*
A. D. FRYE,

New-York, Oct. 20th, 1842.

Report on Raw and Manufactured Silk.

The committee appointed by the Managers of the Fifteenth Annual Fair of the American Institute, to examine and report on raw and manufactured silk, beg leave to submit the following report:

They were much gratified to observe a greatly increased number of specimens, including those which were presented for competition, as well as objects of curiosity, exhibiting the ingenuity of the producers. Among the former are many articles well wrought, displaying great skill, and evincing ability on our part, with more experience, ultimately to compete with any part of the world. Even now our cocoons and raw silk, and some of the manufactures of the article, might easily be mistaken for those of Italy, with its centuries of experience in the silk culture. From this addition to the exhibition over former years, the committee are pleased to infer that practical silk culture did not expire with the speculation in mulberry trees. That mania which was predicted by the opponents of the silk business in this country, as fraught with great evils, has not been without its benefits; instead of filling our fields with useless roots, which the plow could not eradicate, a valuable shrub has been introduced, acclimated and diffused into the remotest corners of our land; which, in its results will realize to us the fable of the Golden Fleece—produce as great a revolution in the agricultural products of our country, as the introduction of the cotton plant: and probably in as short a period, will the article of raw silk form an important item in the exports of this country to Europe. With this firm belief, the committee beg leave again to call the attention of the Institute, and through it to recommend silk growers to use great care in the selection of cocoons for seed, and again repeat that no cocoon has been brought to their knowledge which exceeds the Peanut variety. Of that variety the worm is hardy, feeds well, comes early to maturity, and produces a large amount of silk of a very desirable quality. And, in respect to reeling, has a decided preference to any other cocoon which the committee have examined. Some few specimens are exhibited at the Fair, but the committee do not advise that any other notice be taken of them than to call the attention of silk growers to the Peanut variety, and recommend them to raise no other. They would also caution silk growers against crossing other kinds with this variety, as the effect is to produce a less valuable kind; and the interest of the silk grower is to improve the breed instead of introducing new and inferior varieties. Even the Peanut silk worm may be improved by selection and care, and it is hoped all who are interested will take every precaution to prevent deterioration.

A very little care is necessary to produce a great crop of silk, and as it has been demonstrated repeatedly, that silk can be made in this country with hired labor, and at the price of American labor, (proverbially high, and may it long continue so,) for $2.00 per pound, including all actual expenses of raising and reeling, we may reasonably expect an increased product from year to year, until it shall be brought to the Fairs in bales instead of skeins.

The committee desire to call the attention of silk growers to the propriety of sending, even now, larger parcels for exhibition. A large parcel of uniform quality ought to be entitled to the highest premium of the Institute. Many small samples are exhibited. One parcel now presented to the committee, containing about 5 ounces, has four or five different qualities, and although handsome, has evidently been so prepared for this exhibition, and is not intended as a sample of the whole crop. Its want of uniformity is objection, an even if this were so. The committee respectfully recommend that at the next Fair of the Institute, a special premium be offered for the largest parcel of reeled silk, of uniform quality, of American growth, produced in the season of 1843, by one family or individual; and also, that competitors be requested to accompany each parcel or article presented for competition, with a written statement of the cost of production, and any other facts which they may wish to make known, or think may be beneficial to the Institute and country.

The specimen of raw or reeled silk which meets the approbation of the committee, and is by them classed as *best*, is No. 359. It consists of one and a half pounds in three skeins, which is a part of a parcel produced by a person who has never fed worms until this season, who was induced to use the peanut cocoons from the recommendation of the Institute at the Fourteenth Fair. This silk is well reeled, having in each skein half a day's work, reeled upon the Peidmontese reel, very even and uniform, with a round thread, well adapted to the present state of the silk manufacture in this country. This silk would be more valuable if reeled finer, but the operator would not probably have made it as uniform or as valuable with her slight experience in reeling. These facts alone speak emphatically in favor of the simplicity and feasibility of the silk business. The committee are informed by the agent of this, that the silk producer raised it at a profit, and is preparing to extend the business largely next season.

The specimen of reeled or raw silk, denominated as second best by the committee, is marked No. 1,221, (exhibited by A. S. Marvin of Long Island,) and is a larger parcel than the last mentioned; made from the peanut cocoons, but not as well reeled; it is however, deserving of notice. The cocoons exhibited with the same parcel, are badly selected, having among them a large number of dupions. If these were reeled together, as is very probable, the cause of the uneveness of this silk is apparent. To show the importance of attention to the quality of reeled silk, and the advantage of care in reeling, the committee have ascertained that the price of the article n the European market varies from $2 to $6 per pound, a difference entirely owing to the care bestowed on the production. There are several other parcels, inferior to the two above named, not deserving particular attention.

Among the practical uses to which American raw silk may be usefully applied, is one discovered by Mr. James Hanly, harp manufacturer, which obviates a great objection (heretofore considered insurmountable) to that delightful instrument. In the variations of temperature in our climate, the harp is subject to be instantly unstrung; much vexation is experienced by the breaking and the apparent impossibility of finding some material, which, from its great strength, would resist this action. The raw ungummed American silk is that material, and harp strings are now presented, No. 1,086, made from it, which are acknowledged to be a great desideratum to the professor of the harp, and are worthy of notice.

The committee refer more particularly to the list appended hereto, as expressive of their opinion of the manufactured articles of silk at the Fair, and hope that their opinions thereon will coincide with that of the Board of Managers.

The committee think the following specimens worthy of notice:

No. 998. Specimen of sewing silk exhibited by A. B. and W. H. Jones of Manchester, Conn., this is considered the best and entitled to the first premium.

No. 207. Specimen of sewing silk exhibited by Edmund Golding of Mansfield Centre, Conn., deserving second premium.

No. 255. Specimens of sewing silk, twist, &c. is worthy of notice, as being made at the Auburn State prison, entirely of American silk; they purpose making two thousand pounds of sewings next year from silk mostly raised in Ohio and this State.

Nos. 129 and 170. Specimens of sewing silk. Both these are of a fair quality, but not worthy of particular notice.

No. 1,121. Specimens of ball twist sewing silk and floss silk exhibited by J. Ryle of Paterson, N. J.; they are considered entitled to a premium, as being of good manufacture and of large sale.

No. 1,122. Specimens of sewing silk exhibited by William B. Frink; they are worthy of notice, as being well made entirely by a hand wheel.

No. 1,139. Specimen of sewing silk, not good, and unworthy of notice.

No. 1,300. Thirty-six yards black silk, manufactured at the State prison, Mount-Pleasant, N. Y., is well made and deserving a premium.

No. 1,064. Cords, gimps and bindings exhibited by John McRae of New-York; they have been brought to very great perfection, and are of large and ready sale; they have already received the premium of the Institute.

No. 876. Silk shirts and drawers, &c., deserving of notice; articles now manufacted to some extent at the Wakefield Mills, Germantown, Pa., of imported silk.

No. 338. Specimens of bonnet wire exhibited by Peter Gruet of Orange, N. J.; best exhibited, and deserving a premium.

No. 1,180. Specimens of bonnet wire, inferior to No. 338.

No. 473. Twelve pieces printed handkerchiefs, worthy of notice as a specimen of madder printing on India pongee.

No. 909. One pair silk stockings exhibited by a lady; deserving of notice; are reeled and twisted from American silk, and grown and knit by the same lady.

All which is respectfully submitted.

JOHN C. HENDERSON,
G. M. HAYWOOD,
W. A. WOODWARD,
} *Judges.*

New-York, October, 1842.

Report of the Judges on Silk Machinery.

The judges appointed by the Managers of the Fifteenth Annual Fair of the American Institute, to examine, investigate and report upon silk machinery, submit their opinion, as follows:

The articles appear to be few in number, and the committee have found it difficult to meet the owners or agents, to obtain from them an explanation of the merits of the several machines exhibited, and from their not being in operation, it is difficult, if not impossible for the committee to give such an opinion as will aid the Managers in deciding whether they are entitled to the approbation and rewards of the Institute. The committee are however enabled to give an opinion of the following articles:

No. 44, a model for feeding silk worms; this to the uninitiated would appear to possess some merit; but the committee are impressed with the belief that nothing is so valuable for that purpose as simple shelves or tables constructed of boards, jackplaned, and covered, if necessary, with paper. Simplicity is necessary to the success of the silk business; and the committee advise that the Institute recommend no complex machinery whatever for the feeding; for no plan heretofore proposed, has superceded the one above named, which has for its great recommendation, that it is precisely adapted to the purpose, and costs nothing for the materials, as they are worth as much after as before; and as there is no patent for it, the whole community are free to use it.

The silk business must, and will ultimately become, a great and important branch of productive industry, in this country; and the whole matter is as simple as rearing chickens, and requires no expensive fixtures. Feed on shelves; use proper hurdles; give them straw or branches to spin in; reel on the Piedmontese reel, which although in use upwards of 100 years, has not been excelled; and it has given the Italian silk a character above all others, as well as advanced the price 150 per cent above that from Bengal. Then let us encourage American artists to produce machinery for winding, throwing, spinning and weaving; and from what American ingenuity has done, we can easily imagine what it will do. It will give us facilities to compete with the pauper labor of Europe and India, and enable us to pay our own free labor, a freeman's price, and still produce our silks in large quantities for home consumption and exportation, but better in quality than that now brought from afar.

No. 98, a silk reel not at all adapted for practical use. The silk reeled on it, if allowed to remain on the spool, as it is compactly laid, and stiffens in that manner with its own gum, will in a short time become rotten and useless, like the cocoon which loses half its value by keeping. The silk thus reeled cannot be used until again re-wound, and must then be first wet, which is an injury the lustre.

The committee being practical silk culturists, are prepared to express a decided opinion in favor of the Piedmontese reel; and this has in fact become an American reel by some slight improvements in the gearing, though retaining the principle which is calculated to give the thread evenness, roundness and lustre. The skein is the proper size for exportation, adapted to the machinery of Europe, which will hereafter be our great market for raw silk; for the committee look upon it as one of the events certain to happen, that this country will become a great silk producing country; and it should be the object of the Institute, as it is that of the country, to encourage the adoption of the simplest kind of machinery adapted to the purpose. With these views the committee cannot consent to recommend American reels, or other machinery, simply because they are American; and not unless they are superior or better adapted to the purpose than those now in use in other silk countries. At the same time they are well aware that American ingenuity is fully adequate to invent, and produce the kind required to meet the wants of the country, as soon as our farmers will produce the raw material.

The committee are of opinion that the great desideratum in the silk business, simplicity, cannot be attained by the adoption of such machines as combine different principles, including the reeling, throwing and spooling processes in one, as it is certain that neither can be well done; and the effect of adopting such machinery, will be to prevent American silk from taking its grade of number one among the silks of the world, to which it is fully entitled.

The reeler, to make the best quality of reeled silk, has constant and full employment, with an assistant to turn the reel. What folly, then, to expect that one person should reel, wind, twist, double and spool the silk, and also turn the reel at the same time. The result of such an attempt is an inferior article, and the sneers at American sewing silk continue to be well founded. Now it is found that well reeled American silk, (some of which is exhibited at this Fair, is fully equal to the best Italian, which in the English market is worth five and a half to six dollars per pound, and would, *even now*, pay the producer at least 100 per cent profit for exportation. What is the difference if this silk is badly reeled? Why, it would sell in the same market for about the same price which it costs to produce it here, viz: two dollars per pound; this is now the price of some of the Bengal silks in the English market.

The English have become satisfied of the cause of this difference, and are already introducing the Piedmontese reel into India.

The silk business has one great recommendation to us as Americans. It requires personal superintendence and care. It is well adapted to give employment to that portion of our population, which from the improvements in machinery, have been thrown out of employment. The silk reel will now supply the place of the spinning wheel, and give pleasing employment and support to a deserving part of the community.

The committee are not averse to the introduction of machinery, for they are aware that with all the improvements which can be made, there will be still enough to employ all our manual labor, which has not other useful and profitable occupation. They wish, however, to encourage such as are really valuable, and discourage such as are not calculated to benefit the silk grower and the country.

With these views the committee do not think the reels exhibited, No. 206 and No. 1285, are entitled to a premium, as not adapted to the advancement of silk manufacture, or calculated for the use of silk producers; as the sewing silk produced on them will not sell for any more, or as much when brought to market, as if simply *well reeled;* and the same mannual labor applied separately to each branch of the business here attempted to be combined, will produce an article of superior quality.

The producing cocoons and reeling silk is properly the business of the farmer. The throwing, spinning, weaving, &c. the business of the manufacturer, and they cannot be advantageously combined any more than the growing and spinning of cotton. There is enough for both to do, and both will derive larger profits for their respective employments, than they can possibly realize from uniting them together. The silk doubler and winder, No. 692, appears to be well adapted to the purposes intended, and the committee think is deserving the attention of the Institute, although the exhibitor does not claim the merit as inventor, but as having made an improvement on the most approved machinery now in use in England, and as the first to introduce the same in this country.

S. M. McKAY,
W. A. WOODWARD, } *Judges.*

October, 1842.

(D.)

COMMUNICATIONS FROM CONTRIBUTORS.

Wheat.

My wheat land varies in soil, some fields a sandy loam, others a clay. General plan of culture—first, corn, well manured, say 25 (two horse wagon) loads of long manure per acre, plowed in twelve inches deep; product from 50 to 65 bushels shelled corn per acre. Second, oats, product about 40 or 50 bushels per acre. Third, wheat, limed about 20 to 30 bushels slacked lime per acre; seed, two to two and a half bushels per acre, soaked in a pickle of salt or saltpetre, and rolled in lime or gypsum. During ten years—the greatest crop 27 bushels per acre; the lightest 15 bushels; weight from 61 to 64 lbs. per bushel. My crop last season was completely flattened by a heavy rain, from which it never recovered. It yielded 16 bushels 42 lbs., the same as my sample, and one bushel 40 pounds shrunk grain, per acre. For ten years I have sold my wheat solely for seed, at prices varying from $1.25 to $2.50 per bushel. The wheat was raised originally from half a bushel of picked wheat, (picked by hand from a heap,) which was sown, and produced eight and a half bushels; which sown again yielded 125 bushels. Twice within the last ten years I have started a new clean picked half bushel of seed wheat, and my present stock is from the third and last half bushel. I have done this, fearing my wheat might deteriorate. This season I have twelve acres sown with wheat, the same as my sample, perfectly free from chess, rye, cockle, or any other description of wheat.

Cost of wheat per acre,

One day plowing, $3; one quarter day harrowing,75c.,.....	$3 75
25 bush. lime 6c. bush. $1.50; 2½ bush. seed wheat, $1.87½,	4 69
Harvesting $2; interest on land $7,......................	9 00
	$18 92

Ten years average crop of wheat, 21 bushels.

Price $1.87 per bushel, ...	$39 27	
Deduct for expenses and interest of land,.........	18 92	
		$20 35

I make no charge for threshing, as I have not given credit for straw.

E. K. JAMES.

Poughkeepsie, March 2, 1843.

Wheat.

The wheat I exhibited at the Fifteenth Annual Fair of the American Institute, and for which a premium was awarded, was raised in the manner following:

After oats were cut in July, the ground was plowed very deep, and left until the middle of August, when it was plowed a second time, and well harrowed. On the first of September my wheat was soaked in salt brine sufficiently strong to bear an egg, drained through a seive, and thoroughly mixed with poudrette, fine salt, oyster shell lime, and ashes. It was then sown damp, with the particles of the above composition adhering to the kernels, at the rate of three and a half bushels to the acre; harrowed twice, top dressed, with three hundred bushels of shell lime to the acre, and rolled.

ROBERT L. PELL.

Pelham, Ulster Co. N. Y.

Egyptian Wheat.

The Egyptian wheat exhibited by me at the Fifteenth Annual Fair of the American Institute, was raised in North Bergen, N. J. on a piece of ground 12 by 15 feet, slightly manured; yielded one peck and one pint of seed, or 77 bushels to the acre; planted broadcast; and weighing 64 pounds to the bushel.

JEREMIAH VAN WINKLE.

Bergen, N. J. Oct. 1842.

Dutton Corn.

The specimen of yellow corn exhibited by me at the Fifteenth Annual Fair of the American Institute, and for which a premium was awarded, was planted about the 22d of May, in hills four feet apart, on a piece of ground planted with corn the year previous; manured in the hill lightly. It was plowed out both ways, and wed and hilled in the common farmer's style. Produce, one hundred and twenty bushels of ears to the acre.

S. VAN VOLKENBURGH.

Harlem, Oct. 1842.

White Indian Corn.

The specimen of corn exhibited by me at the Fifteenth Annual Fair of the American Institute, and for which a premium was awarded, was planted about the 20th of May, in rows of about three feet apart, and the corn dropped eight inches apart; on a piece of ground planted the year previous with potatoes. Manured with about twenty loads of street manure to the acre, and once plowed in. Crop, about one hundred and twenty bushels of ears to the acre.

GEORGE CHESTERMAN.

Harlem, October, 1842.

Apples.

The orchard from which the apples exhibited by my gardener, Maurice Cunningham, at the late Fair of the American Institute, and for which a premium was awarded, were grafted on natuarl stocks when one year old, in the following manner:

The small trees were raised from the ground on the 6th of April, by aid of a spade, care being taken not to injure the roots. The top was cut off one inch above the roots, which remaining portion was split with a sharp knife through the center, and a graft taken from a bearing Newton Pipin tree inserted; they were then set out in nursery rows, eighteen inches apart in the row, the rows four feet apart; they were then covered, except about a quarter of an inch, which remained above ground. The plow was used three times during each summer between the rows, until the trees were five years old; then they were taken up and set out in the quincunx order, in the month of April. A hole was dug for each tree, three feet in diameter; the top soil to the depth of eight inches, as taken out, was laid on one side of the hole, and the sub-soil to the depth of sixteen inches, on the other. When the hole was completed, a part of the top soil was thrown in the bottom, well incorporated with thoroughly rotted stable manure. The tree was then set one inch deeper than it stood before taken from the nursery, and the balance of the top soil was then placed over the roots, finely pulverized with the hand; the tree at the same time being gently shaken during the operation. Two pails of water were then thrown in, and left five hours to settle; when the hole was filled with the sub-soil; which should be covered to the depth of an inch, with slacked oyster shell lime. In the month of March my trees were washed with soft soap, put on with a whitewash brush, after having been scraped with an iron scraper, and trimmed in the month of June.

ROBERT L. PELL.

Pelham, Ulster Co., N. Y.

Grapes.

Gentlemen of the American Institute—In looking over the list of premiums awarded by the Managers of your most valuable institution, my attention is particularly called to the last page, in which the Managers of the Ffteenth Fair call upon competitors entitled to premiums awarded to them at said Fair, for a written account of the mode and manner of cultivation, &c., for the purpose of advancing the objects of the institution through improvements in Agriculture and the Arts.

In compliance with your request, I place at your disposal a few brief remarks touching my mode of production. While I am duly sensible to the regard manifested by your general application, and by the flattering terms in which your sentiments and those of the institution have been conveyed in your reward to me, I am yet aware that I owe all to your judgment, and not to any value which I place in my own, as the production itself possesses the interest you have bestowed upon me on this occasion.

In looking back upon the history of man, it is obvious that different ages of the world have been distinguished by different characteristics. The progress of the American Institute has from time to time been marked by its predominating trait, communicating its impress to industry, science, and art. Around it the aspect of human life grows brighter, and the controlling principle is worthy of the gentlemen who compose it; being endowed with limited accommodations, with powers only growing out of annual instalments by contribution, whose extent, after an existence of only fifteen years, is without a parallel, and whose use constitutes the advancement of agriculture, science, industry, art, individuals and societies. It is thus that prismatic rays tinge with their hues, while they illumine with their light, the objects upon which they are cast. The encouragement thus given, enables us to compete with other and older countries in the contest for ascendancy.

In compliance with your request, in giving you my report, I will first commence with grapes, the cultivation of which has occupied my leisure moments for the last twenty-one years. Perhaps my taste for grapes emanated from my father being something of a *connoisseur* of the article.

The soil preferred, must be of a rich fertile nature, mixed with sand, but of durable bottom. Vines will flourish in most soils in the vicinity of New-York. The quality of the fruit differs in different soils, though of the same species of grape. If the soil be wet, the roots will not make, and therefore produce but little fruit, if any, and of very inferior quality, even with proper pruning and the best of care. If the soil is hard and dry, equally bad effects are produced; there not being sufficient moisture to sustain the foliage, how can it sustain the fruit, which requires a constant supply? Thus, if the soil be well incorporated with well-rotted manure, it is loose and admits the atmosphere and dew, which are both necessary; besides this, you have the strength of the manure to sustain the foliage and fill the fruit. Nothing, however, should be left upon the branch which bears the fruit, but the natural leaf opposite to the cluster; this is necessary to protect the fruit from the intense rays of the sun, which, without it, will blast the fruit. A free circulation of air is also necessary; all the succors being taken off, and nothing but the new shoot, with the leaf at every joint the three or four first joints, the clusters of grapes hanging disengaged, with a mixture of shade and sun and a free circulation of air.

Horizontal frames are not so congenial to grapes as ascending frames; they are apt to be too much neglected; and in most cases where they are used, deprive the fruit from the occasional rays and warmth of the sun, which is essential to the ripening as well as the sweetening of the fruit. This may be proved by wet seasons; the fruit is apt to be sour, and many of the grapes, and even clusters, do not come to perfection; while those clusters most exposed to the sun, and yet on the same vine, are of a more matured cast and have a sweet, rich flavor; while those not so much exposed, are green, and the flavor sour. A southern or eastern exposure is best adapted to the health of the vine generally. The severity of the winter does but little or no harm to our native grapes. The changeable weather in the spring of the year, is the time when the vine most suffers. The frequent freezing and thawing does more to injure the vine than severe steady cold weather.

My mode of protecting vines, which I have introduced into this country from France, such as the Fontainbleau, Rough Black, Black Cluster, Napoleon, Constantine, Queen, White Sweet Water, &c.: These varieties all require protection, with the exception of the Water Grape, that being more hardy, and stands the changeable weather best. The others I invariably protect in the following manner:—As soon as the frost at the commencement of the fall shall have removed the leaves, I then trim or prune my vines very close, leaving only two or three buds for the next or following year. After this is done, I lay the vine down, being careful to stake them with small stakes, (the stakes being my sentinels.) I then cover them with earth full six inches thick; this being done, my work with the vines for the winter is over. In the spring, as soon as the weather becomes settled, and being satisfied of no more frost, I uncover the vines, and throw over them some loose straw to protect the buds from the heat of the sun, which would blast them, after coming from under the earth, when they are considerably swollen and almost ready to shoot forth. After the vine has become inured to the change, I then pole them, and as they shoot forth, train them, being careful to remove all suckers and to secure them from injury by wind, which is apt to break the entire shoot if not tied; in this way I train. When the vine is in blossom, I am careful not to touch them; and in fact, if rain should set in at this critical time, more injury is done towards blasting the fruit than any other season of the year. It cuts off the farina which will be thrown off by the growth of the grape; if knocked off before, it injures and blasts the fruit. When the grape has grown to the size of a common pea, I then commence my second training and tying. I take a pair of small scissors and cut from the cluster all the small grapes that would not come to perfection if left, but rather in the way of those of quick and rapid growth, and if left would not ripen, but if cut from the cluster, they leave room for the large grapes to grow larger; and in this way I have fine clusters and good grapes. If left without this thinning out, my clusters are often crowded and begin to rot before the grapes are ripe.

I am not friendly to leaving too much fruit upon a young vine. I believe it injurious to the vine in its future bearing. Some vines show more fruit than the roots can supply with nutriment. In this case, I invariably cut off full one-half, and thin out the remainder, and have fine fruit and more in weight than if I had left the whole of the clusters on. It has been said that where peaches grow perfect, the grape will succeed. I know in the vicinity of New-York, peaches do not succeed well, but grapes flourish.

JOHN P. HAFF.

Pumpkins, Melons, &c.

Permit me to give you a brief account of my mode of cultivating pumpkins, squashes, melons, and Lima and bush beans, all of which I plant early in the spring, about the fifteenth of April in pots under a small glass frame. In this way I get my seed up; and by the time frost is done, my plants in the pots have sufficient root to hold the earth in the pot, my ground being prepared for their reception. I shove the plant from the pot with the earth attached, so as not to disturb the root, and then let it take its chance. In this way, I have early and good crops; and in fact, better than in the ordinary way. For proof, my main crop of pumpkins and squashes, which I planted about the tenth of May with my corn: the weather or season being very wet, the seed did not come up but rotted in the ground; and the few that did get up, produced nothing. I then had my plants in pots to supply their places; the yield was good; some of the best, I sent to the Fair. My crop of Lima beans from pots, were the best beans. I had those planted the first of May all rotted in the ground, and were again planted over; the most of the second planting failed; I supplied their places with the plants from my pots, and had a good crop.

For experiment sake, I planted a small piece of my cornfield with corn and potatoes in the same hill four feet apart, the usual distance for corn. In each hill I placed four grains of corn and two setts of potatoes; when the corn came up, I pulled out two spears, leaving two with two setts of potatoes; the corn was plowed twice and hoed twice. In working the corn, I worked the potatoes. The only manure used, was a teacup full of ashes to the hill. In this case, I had a good yield of corn, and my best potatoes were those raised by the corn; and the corn and potatoes exhibited at the Fair, were those raised together. My main crop of potatoes was adjoining my corn in the same field. This patch I manured in the hill with barn yard manure, one shovel full to the hill of potatoes. The season being very wet, the potatoes were small and much eaten with the grub and fit only for feed for cattle and hogs.

My vegetable garden I manure in the fall; spade in the manure, and let it lie in ridges for the frost to act upon it in the spring. I again manure it and spade it up, rake it over and plant my seed. My beets I plant twelve inches asunder in rows; between the rows I plant two rows of spinach for the purpose of keeping the weeds down and giving the plants room to grow; I use a small shoving hoe between the rows of spinach and beets. If done in the morning before the sun is up, the weeds are crisp and cut easy; and when the sun gets up, they soon wither and die, leaving nothing but the plant to receive the richness of the soil. The spinach is of rapid growth, and comes out about the time the beets want to be thinned out and weeded in the rows. I leave the beets from four to six inches apart in the rows, giving them frequent hoeings. My work with beets is finished till digging. In this way I have two crops, one of spinach, and one of beets. I gathered from a bed in this way, twenty feet square, thirty-three bushels of beets and fourteen bushels of spinach.

JOHN P. HAFF.

Bull's Ferry, N. J.

Celery.

In compliance with the act of the Legislature of the State of New-York, making it obligatory on persons receiving premiums for agricultural productions from the American Institute, to specify the mode of raising the same, expense or otherwise, I beg to hand the following description necessary to be observed for raising celery of like quality for which the Institute awarded me a premium at its last annual Fair.

In selecting lands best adapted for raising celery, take such as is rather moist and fully exposed or open to the south, having been under garden cultivation for at least one year previous. For raising the plants I use about a common wheelbarrow full of rotten stable manure to each bed of 10 feet square, spread on the surface and turned under, some 6 or 8 inches deep, the same raked smooth, and about the last week in March or first week in April, sow the celery seed broadcast, raking the seed under. I am careful to keep the bed free from weeds until the plants are ready for drawing. The land intended for the reception of the plants must be well prepared by plowing, cleaning and harrowing, or raking smooth on the surface. I draw the furrows about four feet apart, and from 6 to 8 inches deep, sloping the sides To about every sixty feet of furrow I use one barrow full of rotten stable manure, which is turned under some four or five inches deep. The plants are generally fit for drawing about the first week in July; when I take the first favorable state of the weather for removing the plants into the furrows, setting them about six inches apart, nipping off the top of each plant from one to two inches. During the growth of the plants I am very careful to keep them free from weeds, and occasionally open the ground about the plants by hoeing. Early in September the plants are ready to admit of being covered on each side with the soil about their height, and when the heart appears, and the weather suitable, I bank up the soil on each side to near the top of the plant, allowing them to remain in this state till ready for market. The actual expense for raising such celery for which I received the premium, every thing estimated at first cost, would be about three dollars per hundred, and yield me from 25 to 33 per cent profit.

JOSEPH CLOWES.

Harsimus, N. J., Oct., 1842.

Culinary Vegetables.

The culinary vegetables exhibited by my gardener, Maurice Cunningham, at the Fifteenth Annual Fair of the American Institute, in October, 1842, and for which a premium was awarded, were raised in a new garden, on ground that had been trenched to the depth of three feet, as follows:

The top soil was taken off to the depth of one foot, and the subsoil to the depth of two feet; well rotted cow manure was then thrown into the trench, and a portion of the top soil mixed with it; then a layer of rotted horse manure thoroughly incorporated with the top soil; after which the trench was filled with subsoil and raked smoth; drills were then made and filled with a composition of salt, poudrette, oyster-shell lime, muck and ashes, and the seeds then sown upon it, then covered with earth and pressed down compactly.

ROBERT L. PELL.

Pelham, Ulster Co., N. Y.

Cabbages.

I planted one-quarter of an acre with cabbages, having first manured it with 16 loads of manure, each load containing 28 bushels.

16 loads of manure at 8 s. per load,	$16 00
Interest on cost of land,	2 00
Labor, plowing, hoeing, &c.,	4 00
Seed, 2 oz.,	50
	$22 50
Team and man to New-York, 8 loads,	20 00
	$42 50
2000 cabbages at 3 cts.,	60 00
Profit,	18 50

DANIEL D. FOLK.

Butter.

The Butter exhibited by me at the Fifteenth Annual Fair of the American Institute, was made in the month of October, 1842, from thirty cows. The cows, feed was clover, pasture and, once a day, field pumpkins, with a constant supply of running water. The only ingredients used, were loaf sugar and Onondaga barrel salt.

In packing butter for family winter use, grated loaf sugar is rubbed on the bottom and sides of the firkin, and the butter, after being salted and having the milk thoroughly worked out, is closely pressed with a ladle in the firkin, and then loaf sugar is again grated over the top to exclude the air.

I prefer the Onondaga salt, for the reason, that after the butter has stood about a week, the surplus salt exudes and forms a crust around the butter, between the firkin and the butter, and also over the top, thereby preventing the air from bleaching or tainting it.

STEPHEN YATES.

Palatine, October, 1842.

Cheese.

Firstly, care is taken to have the milk and rennet *perfectly* sweet, otherwise an unpleasant flavor is produced in the cheese. The milk, however, has as much of the animal heat evaporated from it as time will admit of.

After the curd is properly produced it is broken up very fine, and well cooked, not so much, though, as to start the oil in the curd. It is seasoned with clean fine salt, pure from lime, and put into the press when cool. It is pressed hard in order to extract all the whey from the middle before the outside closes tight. The pressing continues for two days, and when taken from the press, a dry cloth is put over it for a few hours, until a rind is formed; then annetto, dissolved in strong lye, is applied, and a cloth is again put over it, until the next day; after the cloth is removed, a think strong coat of melted beeswax and lard, or butter, is put on. A bright, smooth surface is obtained, and kept by constant rubbing and turning, until the cheeseis cured. S. PERRY.

New-York, Oct., 1842.

AMERICAN SALT.

To the President and Board of Managers of the American Institute.

GENTLEMEN—

I most respectfully take leave to crave your notice of the specimen of salt rock from the salt mine in Washington county, Virginia, and to the sample of fine table salt from the extensive salt works of that place; and also to samples of salt from the very extensive works and salt fields in the Onondaga valley in this State; and also to the remarks, &c. which are below.

May I ask you, in behalf of the great public interest which this necessary of life sustains, to examine these specimens and samples, not only as respects the quality, but also in regard to the quantity now manufactured in our country, and the low price at which it is sold, and the ability of our own citizens to supply the inhabitants of this great and growing country with this important article, which, as will be seen in the sequel, is so extensively used?

Bread is said to be the staff of life—that our soil produces in abundance; water comes next in order, and this the clouds shower down upon our earth in rich profusion, supplying its rivers, lakes, springs, wells and aqueducts with that fluid, which is the dissolved crystals of that primative stock, which had its place in the creation ere the solar orb had moved its terrestrial attendants around it as a center in this one great system, and which now forms the arctic and antarctic fountains of the great deep, the breaking up of both of which in the same day by the melting of their continents and mountains of ice deluged our earth with a flood of the resulting aqueous fluid from their water crystals!

Next in order comes another crystalized body—salt; an article so necessary to animal life, that even the monster beasts of the forest travel its rugged paths for immense distances to taste its sweets. In some sections of our globe, salt constitutes the circulating medium. It passes as money, and truly it may, for it has intrinsic value and extrinsic beauty, for the brightest gem will not out shine the crystals of the Solar Salt of Onondaga!

The importance of the manufacture of salt from the mines of rock salt, and from the waters of the saline springs in the United States, as compared with the importation of salt from abroad, may be inferred from the following statement:

I have received from the Hon. McClintock Young, acting Secretary of the Treasury of the United States, a statement of the salt imported into the United States from foreign places during a period of ten years, from 1832 to 1841, both years inclusive, to which I have appended the rate of duties, which is as follows:

Imports and Rate of Duties.

In 1832,	5,041,326,	duty	10	cents.		
1833,	6,822,672,	“	10	“		
1834,	6,058,076,	“	9	“	4	mills.
1835,	5,375,364,	“	9	“	4	“
1836,	5,088,666,	“	8	“	8	“
1837,	6,343,706,	“	8	“	8	“
1838,	7,103,147,	“	8	“	2	“
1839,	6,061,608,	“	8	“	2	“
1840,	8,183,203,	“	7	“	6	“
1841,	6,823,944,	“	7	“	6	“

The bushel is reckoned at fifty-six pounds, and the duty on the same quantity.

The quantity of salt manufactured in the United States in 1840, as appears by the returns made by the persons employed to take the census of the United States, was as follows:

Aggregate amount of Domestic Salt manufactured in each of the States of the United States according to the sixth Census.

STATES.	No. of bushels produced.	No. of men employed.	Capital invested.
Maine,	50,000	15	25,000
New-Hampshire,	1,200	1	2,500
Massachusetts,	376,596	463	502,980
Connecticut,	1,500	2	3,000
New-York,	2,867,884	332	5,601,000
New-Jersey,	500	1	1,500
Pennsylvania,	549,478	255	191,435
Delaware,	1,160	17	200
Maryland,	1,200	3	100
Virginia,	1,745,618	624	300,560
North-Carolina,	4,493	8	7,090
South-Carolina,	2,250	7	1,500
Kentucky,	219,695	291	163,585
Ohio,	297,350	240	113,195
Indiana,	6,400	19	20,050
Illinois,	20,000	22	10,000
Missouri,	13,150	36	3,550
Arkansas,	8,700	25	20,800
Florida Territory,	12,000	4	30,000
	6,179,174	2,365	6,998,045

The salt made in the State of Maine was manufactured in the county of Washington; that in Massachusetts in the counties of Barnstable, Bristol, Dukes, Norfolk, Suffolk and Plymouth; that in Connecticut in the county of New-London; in New-Jersey in Atlantic county; in Delaware in the county of Sussex; in Maryland in Worcester county; in Virginia from sea-water in the counties of Accomack and Princess Ann; in North-Carolina in the counties of Carteret, Currituck and Onslow; in South-Carolina in the districts of Beaufort, Charleston and Georgetown; in Florida at Key West.

The salt made from saline springs and wells in the other States is as follows: in New-York in the counties of Onondaga and Cayuga; in Pennsylvania in the counties of Allegany, Armstrong, Beaver, Butler, Fayette, Indiana, McKeon and Westmoreland; in Virginia in the counties of Kanawha, Harrison and Washington; in Ohio in the counties of Athens, Columbia, Guernsey, Jefferson, Lorraine, Meigs, Morgan and Muskingum; in Kentucky in the counties of Adair, Barren, Breathit, Carter, Clay, Cumberland, Floyd, Knox, Perry, Pulaski and Whitley; in Indiana in the counties of Brown, Fountain, Monroe and Montgomery; in Illinois in the counties of Gallatin and Vermillion; in Missouri in the counties of Cooper, Howard, Randolph and Saline; in Arkansas, in the counties of Clark and Sevier.

The quantity of salt manufactured in the United States in 1840, added to the quantity imported in that year, would make an aggregate of 14,302,377 bushels, which will give to each man woman and child in the United States a proportion of near seven eighths of a bushel of salt.

The amount of duty on salt imported in 1840, and secured to be paid to the United States that year, was $617,363.42, which is less than four cents each for every inhabitant in the United States.

I have carefully examined the New-York price current from 1832 to 1841, both years inclusive, to ascertain the price of Turk's Island salt in the New-York market during these years. I selected the months of April and October in each year, as affording a fair sample. The following is the result of my examination:—

	April.	*October.*
1832,	50 cents.	53 cents per bushel.
1833,	42 "	47 do
1834,	40 "	41 do
1835,	40 "	42 do
1836,	39 "	41 do
1837,	43 "	41 do
1838,	33 "	39 do
1839,	41 "	40 do
1840,	36 "	37 do
1841,	31 "	27 do

About two fifths of the foreign salt imported into the port of New-York, in 1841, was Turk's Island salt.

The reduction of the price of the foreign salt by the competition of the American salt, it will be seen, has diminished the price of the foreign article during that period to the consumer, 26 cents per measured bushel, which is a saving to every inhabitant of the United States, on the proportion allotted to each, of abount 16 cents; this exceeds their proportion of duty 12 cents. Thus each consumer is a gainer by the duty.

The duty on imported salt became reduced to five cents and eight mills per bushel of 56 pounds, on the first of January, 1842, by the gradual reduction provided for in the compromise act of 1832, and this rate of duty continued until the 30th of June of this year. On the first of July, 1842, the duty on foreign salt under the same compromise act, became fixed at twenty per cent on the home valuation.

By the tariff passed by Congress in August, 1842, the duty on foreign salt is fixed at eight cents on the bushel of 56 pounds; and should this tariff remain permanent, capitalists will embark in the manufacture of salt by solar evaporation.

Turk's Island salt is made from sea water evaporated by the rays of the sun. It is delivered on board vessels in sacks of half a bushel each, and costs about eight to ten cents per bushel at the island.

Bonnaire, Curacoa, Cette, and many other salts imported from abroad, are made in the same manner.

The Bonnaire salt is very heavy, weighing from 80 to 90 pounds to the bushel.

The quantity of salt imported into the port of New-York in 1840 and 1841, and the first quarter of 1842, was as follows:

In 1840,	1,600,573
1841,	1,522,333
1842, first quarter,	198,545

The quantity of Salt made at the Onondaga salines in the State of New-York, which belong to the government or people of this State, during ten years from 1832, to 1841, both years inclusive, was as follows:

In 1832,	1,652,985	In 1837,	2,161,287
1833,	1,838,646	1838,	2,575,032
1834,	1,943,252	1839,	2,864,718
1835,	2,209,867	1840,	2,622,305
1836,	1,912,858	1841,	3,340,769

These bushels are also calculated at 56 pounds each.

The State of New-York now collect a duty of six cents per fifty-six pounds for all the salt made at the Onondaga salines, which duty was formerly appropriated to the payment of the interest on the Erie canal debt, but now it goes into the General Fund.

Of the salt manufactured at these salines in 1841, two hundred and twenty thousand bushels were coarse salt made by solar evaporation; the residue was fine salt made by evaporating in iron kettles, by heat of fires supplied entirely with wood as fuel.

The number of kettles used for the manufacture of fine salt at Onondaga salines in 1841, was six thousand seven hundred and forty-eight, containing in all, four hundred and ninety thousand and eight gallons.

The number of superficial feet of surface occupied by the vats for solar evaporation, were one million four hundred and ninety-eight thousand, two hundred and fifty-three.

In the latter estimate is the steam works of Mr. J. W. Hale, which cover 5,175 superficial feet, from which was made 13,553 bushels of coarse salt.

The ground covered by the salt works is near six hundred acres.

It will be seen that the quantity of salt made at the Onondaga salines in 1840 and 1841, was about double that imported into the port of New-York during the same years.

The brine in the wells at Syracuse is of 78 degrees of strength; 100 degrees being the point of saturation; about 30 gallons of the water make a bushel of salt. At the Saltville wells in Washington county, Virginia, the salt water from the wells, when sunk within less than fifty-feet of strata of SALT ROCK of 150 feet in thickness, was about of the same strength as the water of the Onondaga wells.

The wells at Syracuse are about 270 feet in depth, and yield an inexhaustible supply of water. These wells terminate in a bed of gravel, and the stratas passed through in boring are fine sand and gravel; the lower stratas of the gravel are agglutinated to a considerable extent.

The wells at Salina are of about 170 feet in depth, and yield water of 80 degrees of strength; and those of Liverpool are 80 feet in depth and yield water of 81 degrees of strength.

The stratas passed in boring in these wells last mentioned are clay, rock and sand.

The strongest water lies in a northerly direction from the Syracuse wells first named, and approaches near the surface in progressing north from the first well, as will be seen by what is stated above.

The villages of Syracuse, Salina, Liverpool and Geddes, skirt the head of the Onondago lake, almost in the form of a crescent, and no doubt will at some future period, not far distant, form one great city.

An examination of this lake, in connection with the salt wells, led me to the conclusion that the lake has resulted from the dissolving of a strata of salt rock beneath the surface of the earth, and that what once formed the surface of the earth now forms the bottom of the lake.

In company with the State superintendent of the Salines, Thomas Spencer, Esq. and the State inspector of salt made at the Salines, Henry W. Allen, Esq. I made an excursion upon the lake during the month of August last, and sounded it with a line in the vicinity of the salt wells. We found the lake for a few rods very shallow, from six inches in depth gradually increasing to three feet in depth, to where the bottom descended quite abruptly for a few feet to the depth of seventy feet: the bottom is of earth, and this abrupt precipice in the water is of the same material.

The nearest well to this sounding, which is one that is now in the process of boring, has been sunk to the depth of 207 feet; the strata of the first few feet is of soil resulting from decomposed vegetation; next a strata of marl of some six feet in thickness; then a thin strata of soil, and below this a body of tough elastic clay of 173 feet in thickness; next, nine feet rock composed of fine gravel cemented with gypsum; next, one foot of tough clay mixed with pebble stones; next, four feet clay, when the auger struck the rock again, and in which the workmen are now boring. It is this strata of clay which I think has settled down, and its surface now forms the bottom of the lake, and its fracture the earth precipice which I have mentioned. This lake is about six miles long and one and a half mile wide, and is drained by Seneca river.

The water of these wells is so strong that it is as profitable to raise the water and evaporate it; as it would be to raise the salt rock and dissolve it, and afterwards evaporate the solution, as very little of the fossil salt can be used without being first dissolved and the solution evaporated.

It seems evident to my mind that the saline properties of the water of the wells at the Onondaga Salines, is derived immediately from fossil salt, and that the deposit of this mineral must be near by.

The withdrawing annually from beneath the surface more than three millions of bushels of solid substance, must make a mighty void to be filled with air or water somewhere, unless the earth settles down and fills the space; it therefore becomes important to determine where the fossil salt lies; for if it should be found to compose the under stratas on which these towns I have named are so rapidly building, when these become one great city, the increased weight upon the surface may be too great for the support which may be underneath, and the whole give way and make another lake. This may be said to be speculation, but there are reasonable grounds to found such a speculation upon. At Syracuse, where the under strata is sand and gravel, this cannot be feared, for the reason, that fossil salt cannot repose in a bed of sand gravel; it is an unnatural position, and one which it is impossible it could long occupy, in a country where great quantities of water fall from the clouds upon a surface which absorbs it.

The Onondaga salines can be made to furnish salt water sufficient to manufacture ten millions of bushels of salt per annum.

The water, as I before remarked, is from 78 to 81 degrees of strength as denoted by the hydrometer, which is graduated at O for fresh water, and 100 for water fully saturated with salt.

Should the State authorities make such arrangements as will result in the condensing the salt water by artificial heat to near the point of saturation, the impurities in the water, which are very trifling, would be precipitated, and the pure brine would then be used in all the vats, which are three in a set, instead of one. The manufacturers of solar salt use one vat to precipitate the earthy matter, a second to throw down the sulphate of lime, and the third to crystalize the salt. In the event of first condensing the water by artificial heat, three times the quantity of salt could be crystallized in the same vats; but a large number of large deep vats would be necessary to receive the brine in which the impurities must be precipitated from the boilers heated by terrestial fire. The result of such a process is a matter of mathematical calculation as to profit; its practicability as a chemical operation is unquestionable. The operation of heat has the effect to cause all earthy particles which are held in suspension in the brine to precipitate, and the concentrating or condensing the salt water to that point at which the impure salt crystallizes, and allowing the fluid to remain quiescent for a few days, the operation of crystallization of the more easily crystallized salts will be completed.

Thomas Spencer, Esq. the State superintendent of the Onondaga Salines, in a letter which he addressed to the editors of the Journal of Commerce on the 29th of July, 1842, and which was published in that paper on the 2d of August, states that the vats for solar evaporation to cover an acre of ground cost about $1,200, and that one man can attend two acres. One acre will produce on an average about two thousand bushels of solar salt annually.

If all the salt manufactured in kettles, &c. at the Onondaga Salines, in 1841, had been produced in vats, it would have required as many as would cover sixteen hundred and sixty-seven acres of ground, which would cost about two millions of dollars for the vats alone, which is a large sum of money for capitalists to invest at a time when the provisions of the tariff remain so unsettled in the public mind as to probable permanency.

Taking into account the cost or rental of the ground, the interest of the capital invested in the vats, and the wages of the men employed, it is evident that the manufacture of solar salt can be profitably and extensively carried on in the United States, and that as much salt can be made at a low price as will be required for the consumption of the people, if a moderate duty like that of the present tariff is continued.

The samples of salt which are exhibited at the Fair of the American Institute, will compare in quality with the same descriptions of salt from any part of the world.

The sample of Onondaga county solar salt is from the works of Messrs. Henry Gifford & Co. of Syracuse. This salt is equal in quality to the Turk's Island salt. Messrs. Henry Gifford & Co. through the State superintendant of salines, Mr. Spencer, have authorized me to say that they will deliver the best Onondaga solar salt at the wharves in the city of New-York, by the boat load, at 31 cents the measured bushel.

The sample of Onondaga common fine salt is from the works of Mr. W. K. Blair. This salt will answer all the purposes for which Liverpool fine salt is used. It is now sold at the salines at five cents per bushel. Some sales have been made at the salines at four cents per bushel, but these are ruinous prices. A state duty of six cents is to be added to this price, which will bring it to eleven cents per bushel. If this salt is brought to the banks of the Hudson river, the State duty is remitted, which debenture will equal the cost of freight, so that it can be delivered at Albany at eleven cents per bushel, to which is to be added the freight from Albany to New-York. This, it will be borne in mind, is the price in bulk. If packed in barrels, the cost will be increased about four cents per bushel, and in bags about nine cents per bushel.

The Liverpool fine salt which is brought to the United States, is packed in bags of 224 pounds each, which is equal to four bushels. Ten of these sacks make one ton, and costs, delivered on board ship at Liverpool, near one pound sterling per ton. The sacks cost fifteen pence sterling each, which is 12s. 6d. per ton in addition. To this is to be added, difference in exchange, freight, insurance and duties. The last sales of Liverpool salt were from $1.57 to $1.60 per sack, equal to thirty-nine to forty cents per bushel, including sack. The Onondaga works should be furnished with stove rooms, for depriving the salt of all the moisture which it is possible to divest it of, by heat.

The sample of dairy salt is from the works of Messrs. D. M. Burnett & Co. This salt is solar salt ground, and in point of quality is superior to most foreign table salt, as will be readily seen by comparison.

The fine table salt is from the works of Mr. S. W. Caldwell. This salt is made by slow terrestrial heat, by boiling the salt water in the back kettles nearest the chimney, where there is but little heat, it is a superior article, and its appearance alone is a sufficient recommendation of its quality. These specimens are exhibited to show the excellent quality of the salt, and call public attention to the great extent of the supply.

These salines are the property of the people of this State—public property—belonging to the great body of the citizens of this great commonwealth. With the monies arising from the duties collected from the manufacture of Onondaga salt, the State has paid a portion of the interest of the Erie canal loan; thus have these inexhaustible salines conferred a double benefit on the people of this State.

During the month of July, 1842, the quantity of salt made at the Onondaga salines, was 363,497 bushels, against 558,643 bushels made in the month of July, 1841. This difference in the quantity arose from the suspension of many of the works of the present season, in consequence of the low rate of duties on foreign salt. Turk's Island salt was entered at the New-York custom house in July and August, 1842, as low as eighteen to twenty cents per bushel; of course the duty at twenty per cent on the home valuation, was about four cents per bushel; this competition was ruinous to the manufacture of salt at Onondaga, hence the stoppage of the works. The price of salt at these works, is only the wages of labor; for the price of the wood consumed in boiling, is the value of the labor in cutting and transporting; therefore the duty operated to paralize industry by compeling the laborer to be idle. The great source of wealth is labor. The price of the produce of labor is governed in the main, by the wages of labor. However bounteous the products of the earth may be, they cannot be gathered without labor. Every public measure which has the effect to encourage industry and give employment to labor, is a public and also a private benefit.

The sample or specimen of salt rock exhibited at the Fair of the American Institute, is from the salt mine at Saltville, near Abingdon, Washington county, Virginia, which county borders upon East Tennessee and North Carolina.

This mine is situate between the Clinch mountain and the Blue ridge, and on the western declivity of the latter. The strata of salt rock is 150 feet in thickness, and lies 220 feet below the surface of the ground. The over stratas are black shale, slate, plaster rock and clay. Shell lime is abundant on the surface near by. This salt rock is of very excellent quality, and is composed almost wholly of the chloride of sodium. The strata was discovered in 1840, in boring for salt water. A well had been sunk in this place a number of years ago, from which considerable salt was made, but the well *caved in*, and the proprietors caused it to be sunk deeper. The water obtained was about of the same strength as that now used at the Onondaga Salines. The quantity, however, was not so abundant as the proprietors desired, and they caused the well to be sunk still deeper, and in this boring they struck the salt rock, which they continued in for 150 feet, when they reached a strata of slate mixed with plaster rock, in which they continued about six feet; but finding the supply of water inconsiderable, the proprietors concluded to sink another well about forty feet from this boring, which they sunk to the depth of 214 feet; in this they obtained an abundance of salt water, which was 22¼° to 22½° of strength as indicated by the hydrometer. This hydrometer was graduated at O, for fresh water, and 25 for salt water fully saturated; 22½° of this hydrometer corresponds with 90° of that used at the Onondaga Salines. The manufacturers find it more economical than to raise the water and evaporate it, than to raise and dissolve the salt rock and evaporate the solution. My highly respectable correspondent at this mine, Alexander Findlay, Esq. who is one of the partners of a large house engaged in the manufacturer of salt, writes me that they can make make all the salt which they can find a market for. The sample of table salt which is displayed at the Fair of the American institute, is from Mr. Findlay's works: it is truly a most beautiful article. The water of this well is the purest and richest in the world. It is from the comparative qualities of the salt water of these two salines, viz: the Onondaga and the Saltville, that I infer that the fossil salt is near the wells in the Onondaga valley.

The salines on the Great Kanawha, in Virginia, are extensive. My worthy and valued correspondent, Lewis Ruffner, Esq., who is extensively engaged in the manufacture of salt at these salines, writes me as follows:

Kanawha Salines, Jan. 17, 1842.

"Small quantities of salt were made at this place, from weak salt water found at the margin of the Kanawha river, in the sand, by the Indians and earlier white inhabitants, up to the year 1808, at which time stronger brine was discovered by boring into the sand rock under the bed of the river to the depth of some seventy feet. Since that period, probably an hundred wells have been bored along each bank of the river, extending for ten miles, to the depth of four to eight hundred feet, not more than half of which are in present use. Each of these wells produces daily a quantity of water sufficient to make 150 to 300 bushels of salt.

"Its strength, tested by a hydrometer graded from O for fresh water and 25 degrees for saturated brine, indicates from eight to thirteen degrees in the different wells—the deepest the strongest. The brine, when heated, shows a large admixture of earthy matter, of a brown color. Boiled in cast iron pans, up to a point as near saturation as is safe to avoid caking, the brine is drawn into wooden reservoirs, in which, when left undisturbed for twelve hours, the sediment is *per se* precipitated; and thence it is drawn into kettles in the hinder part of the furnace for granulation, or into larger wooden reservoirs, as is now becoming common, through which the steam is conducted by copper pipes from the pan or boiler, and the brine thus converted into 'steam salt,' a kind of salt well fitted for use, being free from bittering, pure and white. The boiled kettle salt is more or less tinged with the iron, and has no small quantity of bittering when newly made, but which drips away after a few months. This latter salt is celebrated in the west for its penetrating meat rapidly, and saving it in difficult weather; yet it does not leave so fine a flavor as the steam salt. The Kanawha salt is universally preferred in the west to any other description of domestic salt for preserving meats—it is believed mainly from the fact of its almost entire freedom from lime in any combination.

"When the wells were first bored to the depth of three to four hundred feet, many of them produced petroleum in large quantities; but that substance has long since entirely disappeared.

"Bituminous coal is the fuel exclusively used for twenty years past in salt making here. It is found abundantly in the adjacent mountains, embedded in horizontal strata of three to six feet in the stratafied shales and sandstones of the country.

"No lime, plaster or slate has as yet been detected in the borings of our wells. White, grey and yellow sand rock, shales and pit coal, are the prevailing substances passed in boring.

"The strength of our brine is not known to be affected in our deep wells by the changes in quantity of superficial waters; although it was formerly imagined that at the depth of three or four hundred feet, high water in the river increased the strength and volume of salt water.

"I will add, that from one and a half to two million bushels of salt, of 50 lbs. weight, are annually made here, and vended in the west and southwest. The price at Cincinnati, by the cargo, is now 25 cents per bushel. We could produce, it is believed, five millions, if the markets would require so much.

"Our coarse salt, when made with care, has a translucent crystal resembling alum. I have no doubt myself that alum salt can be made here of unequalled purity to very great advantage, and would be, should Congress give us a reasonable protective duty, and could the requisite capital be commanded, which I doubt whether our own people at present can furnish. In boring, recently, two salt wells in the neighborhood, to the unusual depth of eight hundred and fifty to nine hundred and fifty feet, good brine has been found, which is forced up by streams of gas to the height to which it is usually forced by pumps, say seventy feet above the surface of the river, in a constant supply. After doing this work, the gas is set on fire at night, and illuminates the whole surrounding valley. The owner of one of the wells is preparing to burn this gas in his furnaces, to aid in making salt."

The United States salines near Shawneetown, Illinois, were many years ago very important to that section of the country. In 1813, they were leased from the government by Charles Wilkins, Esq. of Lexington, and his associates.

In 1814, when I was at these salines, the shakes of earthquakes were quite frequent. In 1811 and 1812, at the time of the disaster at New Madrid, these shakes were very severe.

In a letter recently received from my correspondent, E. Mills, Esq. of Shawneetown, Ill., he remarks: "The shakes, as they are called, are not unfrequent at these salines. The wells average about one hundred and thirty feet in depth, and are sixteen in number. One hundred gallons of the water make one bushel of salt. Iron ore and limestone are abundant; clay altogether in the digging to the rock; sandstone plenty; no bituminous coal. Our market for salt is St. Louis and the points on the upper Mississippi."

In another letter, which I recently received from my correspondent, Dr. John Croghan, of Locust Grove, Ky. he remarks:

"I formerly owned an extensive body of land denominated 'the Salt Lick Bend of Cumberland,' on which there were strong indications of salt water. The only unfavorable appearance was that of lime stone rock—a rock which is not an associate of the salt formation; and almost invariably when the salt water is found under such circumstances, it (to use the workmen's expression) 'gives out;' or after the introduction of the copper tube, *it blows*, by means of which the whole of the water is thrown with great force out of the cavity which contains it. I have heard of the poles being driven, much to the consternation of the workmen, to a great height in the air. When this is the case, it is unaccompanied by any discharge of water. The gas, set free by the introduction of the boring rods into the cavity which contained it, is the carburetted hydrogen, and is found in water springs called 'burning springs.' A well was bored on Green river, in the county of Casey or Adair, Ky. in which I am told a terrible explosion occurred, caused by the mixture of atmospheric air with the carburetted hydrogen. Rocks and the largest of trees were torn up, and thrown a considerable distance. There is a salt well on Renwick creek, Cumberland county, Ky. in which the water is contained in a cavity; the salt makers work it until they exhaust the cistern, and renew their operations when it is replenished, which takes (as well as I recollect) two or three months. At the works which I own on Cumberland river, the earth is excavated to the depth of 30 or 40 feet, embracing an area of about half an acre. An incredible number of buffalo and other bones were found here. Salt was manufactured nearly forty years ago at this place, by persons living in the neighborhood. They dug but a few feet in the ground, and obtained water, which I understood was very weak. About fifteen years since, I hired some borers and commenced operations in the bottom of the excavated ground, only 30 or 40 yards from the river. In descending to the depth of 80 feet, we struck a small vein of very strong salt water, and after going to the depth of 200 feet through solid rock, the auger (to use the language of the borers) 'fell,' and a large stream of water mixed with petroleum poured out of the well. In the course of a short time the petroleum ceased running; the water, though very abundant, was, as I anticipated from the bad company in which the salt rock was found (lime stone,) exceedingly weak, so much so that I would not work it, and I rented it to some men in the neighborhood for a term of years. Since steamboats commenced navigating the Cumberland, salt can be purchased at so reduced a price that no one could manufacture it at my works without sustaining a loss."

These weaker salines in the far west, were, in former times, and before the white men settled in those regions, the resort of buffalo, deer, &c.

An account was published in the Journal of Commerce of the 9th instant, of the explosion in the well near Elmira, Chemung county, N. Y., the week previous, in consequence of a lighted candle being taken down into a well newly dug, which ignited the carburetted hydrogen gas. This must have been abundant, and had become mixed with about an equal volume of atmospheric air, thereby becoming explosive. In this case two men were injured by the explosion, and one killed.

The salt made in Maine, Massachusetts, Connecticut, New-Jersey, Delaware, Maryland, North-Carolina, South-Carolina and Florida Territory, and the sea shore of Virginia, is from sea water evaporated by solar heat.

All the other salt noted as made in the other States, is made from saline springs and wells. The salt mine in Virginia, at the period at which the census was taken, was not then discovered.

In the United States a limited quantity of salt only is used, but in England and France a cheap means of manufacturing a valuable alkali from it has been discovered. At the present time large quantities of soda ash and sal soda are made from common salt, and these articles are now being extentively used throughout the world.

The soap manufacturers and glass makers are using soda ash as a substitute for pot ash, which latter article is becoming scarce and dear, in consequence of a diminution in the quantity of wood ashes.

A well has recently been sunk at Montezuma, in this State, to the dept of 605 feet, yielding water of great specific gravity. This water by the hydrometer denoted 100 degrees, which is full saturation of common salt in hot water. On analysis it yields 1024 grains of common salt, and 1088 grains of chloride calcium and magnesium to one pint of water.

Mr. L. P. Rice, who superintended the boring of the well, in his letter to me of June 26, 1842, states:

"At 190 feet struck the first vein of salt water, which stands by the hydrometer at 44 degrees; at 245 feet at 48 degrees; at 501 feet at 52 degrees; the last vein, at 298 feet, stands 100 degrees, or full saturation. The boring was thorough red and blue indurated clay, plaster rock and slate."

His Excellency Governor Seward, in a letter to me of June 22d, remarks:

"The operations at Montezuma are likely to result in the discovery of important facts bearing on your theory."

Nature has been most bountiful in its provision in the supply of the material for the manufacture of this article of absolute necessity, both in the salt mines and springs of salt water, which are to be so abundantly found in various sections of our country.

I will, in the course of a few days, lay before the public a further statement in relation to the salines of this State, and also in relation to the fossil salt in Virginia.

E. MERIAM.

Brooklyn, October 10, 1842.

Tibbett's Columbia Pigs.

In compliance with the rules of the American Institute, I send you a description of the manner of raising and feeding my Columbia pigs, to which the Institute at its Fifteenth Annual Fair, awarded a silver cup.

These pigs were taken from the sow when seven weeks old. Their feed at first was milk, after the milk had been taken off mixed with a little Indian meal. As they became older the milk was mixed with the slops of the kitchen, with a gradual increase of meal, or some times rye bran. The quantity of meal was from a handful at first to about three quarts per day, for the two. They were fed regularly; at first, five times a day, and afterwards, three.

The boar, (Victor) closely confined, grew faster than the sow, (Betty) running at large, and weighed when six months and eighteen days old, three hundred and fifty-three pounds.

Three of this litter were butchered, (after the best had been taken out for breeding,) at eight months and twenty-six days old, and after they were dressed, their weight was 262, 282 and 315 pounds. One also at nine months and six days old, and weighed 324 pounds. These were fed in Columbia county, N. Y.

Their dam, in good store order, is supposed to weigh from 500 to 600 pounds.

I shall have three sows litter about the first of March. Several of the pigs are already engaged. I sell them at twenty dollars a pair, put in boxes and delivered in New-York.

H. W. TIBBETS.

Yonkers, October 30, 1842.

Bott's Straw Cutter.

The proprietor of this implement, respectfully begs leave to avail himself of this method of calling attention to what he conceives to be the peculiar merits of his machine. From his own agricultural experience, he found, that while several machines already invented, left nothing more to be desired in point of expedition, none of them were so constructed as to be manageable with the small degree of mechanical skill that usually belongs to a farm laborer. As a proof of this assertion, the well known fact that all the modern improvements in this machine, after having been fairly tested by the farmer, have been abandoned for the old fashioned hand knife, whose superior simplicity more than counterbalanced its want of mechanical facilities. With an eye to this fact, this machine has been gotten up. The cutting is effected with a short, plain and simple knife, that any smith can make, and any laborer can grind or set, affixed to a rotary head; which for several reasons is the best form in which a cutter can be used. The manner of feeding is peculiar, holding and retaining the last straw, so that, no matter how small the quantity, none is dragged through without being cut; at the same time, any amount may be forced through, without injury to the cutter. This peculiarity, with its great strength, adapt it equally to the finest, and the coarsest provender. In rapiditiy of execution, it is not excelled by any machine which cuts as short. By the use of the different size rollers, the length of feed may be varied at pleasure.

C. T. BOTTS.

On Corn Stalk Sugar.

T. B. Wakeman, Esq. *Cor. Sec'y.*

In answer to your inquiries in relation to corn stalk sugar and its manufacture, I would state:

That the juice of the corn stalk grown with a view to sugar making, will give sugar of a superior quality; that it will yield as much sugar per gallon as juice of the sugar cane, and the only doubt in my mind upon the subject of growing maize for purposes of profit in this way, arises from my having no well authenticated information as to the number of gallons of the juice which can be obtained per acre.

I have strong doubts as to the economy of manufacturing sugar from corn stalks by farmers for their own consumption. The expense of apparatus is to great, unless it be manufactured in large quantities. It is true that common sugar may be made over the naked fire, in copper vessels, without other apparatus; but the labor, fuel, moulds, et cetera, would render its cost very nearly, if not quite as great as the price usually paid for cane sugar.

If the quantity of juice which can be procured from an acre of corn stalks be as great as from an acre of sugar cane, then there can be no doubt that, in the large way, its manufacture would prove highly profitable. The corn stalk has many advantages over the cane, its joints are less frequent and not so strong; less power is therefore necessary to express the juice than is required for sugar cane. The *bragass*, or refuse, after passing the mill, can be used as fodder, and the corn blades are also very valuable for the same purpose.

For particulars as to the best method of manufacturing brown or yellow sugar from corn stalks, I would refer you to my letter to the Hon. H. L. Ellsworth, contained in Congressional Doc. No. 109, folio 75, for 1843.

If the yield per acre be as much as supposed, the manufacture of this kind of sugar would, in the large way, succeed. If the farmers, in a district of country sufficiently large, could be induced to devote their lands exclusively to the growth of maize, and a refinery were erected in the center of such a district, then white sugars of the finest qualities could be made directly from the juice. A well regulated refinery, properly constructed, would cost (exclusive of building) $20,000 to $35,000, and would be capable of producing 15,000 lbs. of white and yellow sugars per day. On such a scale it would prove profitable; but should the amount of stalks be such as to prevent the proprietors from manufacturing more than one-third of this quantity, it could not possibly prove profitable. The expenses of such an establishment would form a large part of the cost of the sugars, and as the expenses for manufacturing 5,000 lbs. would be nearly as great as for 15,000 lbs., this difference alone would be sufficient to deter operators. Indeed, sugar making or refining can never be carried on profitably unless on a large scale; the more expensive persons employed about such an establishment, can attend large as well as small quantities, and every item of expense is less per pound in large establishments than in small ones.

Having made arrangements to try the experiments necessary to obtain correct data, during the following summer, I shall take pleasure in communicating to you the results.

I remain, sir, yours respectfully,
JAS. J. MAPES.

New-York, April 5, 1843.

On Crytalizing Corn Syrup.

Hon. H. L. Ellsworth:

Your favor is duly received. You request to know the best method of crystalizing corn syrup, and I know of no more ready method to afford the information required, than to detail the entire mode which should be pursued for its manufacture:

1st. To cut the cane as ripe as possible, but before any acetic acid is formed; litmus paper, touched to the fresh cut cane, will turn red, if acid.

2d. Express the juice without loss of time, as every moment after cutting will deterioriate its quality.

3d. A small quantity of clear lime water (say one quart to a hundred gallons of juice,) should be added the moment it is expressed, unless the juice shows acidity with litmus paper; in that case, no lime shoud be used, but a solution of sal soda, or soda ash, should be added, until it is precisely neutral.

4th. When the juice is neutral, (free from excess of acid or alkali,) it should be evaporated in such an apparatus as would finish its charge in thirty minutes; if the boiling power is too small, good crystalization cannot possibly be obtained.

The whole time occupied from the cutting of the cane to finishing its boiling, should not exceed one hour.

5th. *To know when the boiling is finished*, place a thermometer in the kettle, and continue to evaporate until it stands at 239° Fahrenheit. If, when placed to run off after cooling, it should be found too freely boiled, the next time boil to 240° or, if too light to run off, to 238°, and so on.

6th. The kettle or boiler should be so arranged, that the moment it is done, its charge should be thrown into a cooler, capable of holding a number of charges. The first charge should be left in the cooler, with stirring, until the second charge is thrown in: then with an oar, scrape the crystals found on the side and bottom of the cooler, loose, and gently stir the whole mass together, (the less stirred the better;) so continue, at the letting in of each charge, to stir gently; and when all is in the cooler, let the whole stand until it cools down to 175°; then fill out into sugar moulds of a capacity not less than fourteen gallons. When cooled in the mould sufficient, (say fourteen hours,) pull the plug out of the bottom of the mold, and insert a sharp point, nearly as large as the hole, some six inches; withdraw the point, and stand the mold on a point to drip.

7th. If the sugar is intended to be brown, leaving it standing on the pot for a sufficient length of time, in a temperature of 80°, will run off its molasses, and leave it in a merchantable shape; it will probably require twenty days. It can then be thrown out of the moulds, and will be fit for use. When moulds cannot be obtained, conical vessels of wood or metal, with a hole at the apex, will answer equally well.

The above description will be sufficient for any operator, if strictly followed: but should any of your friends wish to make the experiment on a large scale, or to produce white instead of brown sugar at a single operation, they had better see me personally, before commencing, as the kind of kettle, and many other minor particulars, will be important. The above description, however, is fully sufficient for the use of the farmer. If the juice of cornstalks be manufactured with the rapidity named in the former part of this letter, no clarification will be necessary, and scum which may rise during the boiling can be taken off with a skimmer; but in the *large way*, both clarification and filtration would be requisite, as in large operations every part of the kettle cannot be got at to skim. Since I last saw you, I have made some experiments on the cornstalk; and if your statements are correct as to the quantity of juice which can be obtained from the acre, then there can be no doubt of its entire superiority over the sugar cane. I fear, however, that the enthusiasm of those who made the experiments you spoke of has led them into errors. It is true that the juice of the cornstalk, grown with a view to sugar making, will yield a juice at 10° Beaumê. I have made arrangements to try the experiments fully in the coming summer, and when done will communicate the results.

I remain, sir, yours respectfully,

J. J. MAPES.

(E.)

List of Cattle, Horses, Sheep, &c., exhibited at the Fifteenth Annual Fair, with Pedigree. See Documents on file with the Clerk of the Senate.

(F.)

LIST OF PREMIUMS

Awarded by the Managers of the Fifteenth Annual Fair of the American Institute, October, 1842.

Agricultural and Horticultural Department.

Stallions—John R. Snedecor, Jamaica, L. I. for the best stud horse, (Abdallah;) silver cup.

John A. Pool, New-Brunswick, N. J. for the second best stud horse, (Raritan;) silver medal.

Brood Mares—Henry Watson, East Windsor, Conn. for the best brood mare, (Betsy Wilson;) silver cup.

Effingham Lawrence, Flushing, L. I. for the second best brood mare, (Iodine;) silver medal.

Colts—George W. Patchen, Brooklyn, L. I. for the best colt, (Logan;) silver cup.

James M. Kidd, Orange co. N. Y. for a bay colt, (Walden;) diploma.

John Wilde, West Bloomfield, N. J. for a bay filly; diploma.

Jacks—John A. Pool, New-Brunswick, N. J. for the best jack, (Don Juan;) silver cup.

Improved Breeds of Cattle—Bulls two years old and upwards.—E. P. Prentice, Albany, N. Y. for the best bull, (Fairfax;) silver cup.

Henry Watson, East Windsor, Conn. for the second best bull, (Prince Hal;) silver medal.

Bulls one year old and upwards.—Thomas Addis Emmet, New-York, for the best bull, (Sir Temple;) silver cup.

S. W. West, New-York, for the second best bull, (Prince of Fulton;) silver medal.

Bull Calves—Wm. Packer Prentice, Albany, N. Y. for the best bull calf, (Cato;) silver cup.

Wm. Gibbons, Madison, N. J. for the second best bull calf, (Avalon;) silver medal.

Cows three years old and upwards—E. P. Prentice, Albany, N. Y. for the best cow, (Matilda;) silver cup.

E. P. Prentice, Albany, N. Y. for the second best cow, (Daisy;) silver medal.

Heifers one year old and upwards—John A. Pool, New-Brunswick, N. J. for the best heifer, (Alderny;) silver cup.

John A. Pool, New-Brunswick, N. J. for the second best heifer, (Louisa;) silver medal.

Heifer Calves—Effingham Lawrence, Flushing, L. I. for the best heifer calf, (Sally;) silver cup.

William Pirnie, Westchester co. N. Y. for the second best heifer calf, (Victoria;) silver medal.

Cyrus P. Smith, Brooklyn, N. Y. for a cow possessing excellent qualities; silver medal.

Native Stock—Bulls two years old and upwards—James Ramsey, Brooklyn, N. Y. for the best bull; silver cup.

Bull Calves—Bethuel Brockett, New-Haven, Conn, for a bull calf; silver medal.

Cows three years old and upwards—Angus McDuffie, Sing-Sing, for the best cow; silver cup.

Josiah Pirnie, Rye, Westchester co. N. Y. for the second best cow; silver medal.

G. D. Small, Newark, N. J. for a cow; diploma.

Working Oxen—John Todd, North Haven, Conn. for the best pair of working oxen; silver cup.

John B. Davis, Derby, Conn. for a superior pair of working cattle; silver cup.

John Hubbard, Guilford, Conn. for a superior pair of working cattle; silver cup.

John Hubbard, Guilford, Conn. for twin steers; silver medal.

William K. Townsend, East Haven, Conn. for a pair of three year old working bulls; silver medal.

Fat Cattle—Davis, Roseman & Co. N. Y. for the best, (Durham heifer, Lady Tonkins;) gold medal.

Philo N. Rust, Syracuse, N. Y. for the second best, ("Empire Ox;") silver medal.

Davis, Roseman & Co. N. Y. for the third best, (Ox Washington;) diploma.

Sheep—Long Wool Bucks—William Pirnie, Rye, Westchester co. N. Y. for the best buck; silver cup.

Charles Blackbourn, Bedford, L. I. for the second best buck; silver medal.

Long Wool Ewes—Charles Blackbourn, Bedford, L. I. for the best ewe; silver cup.

William Pirnie, Rye, Westchester co. N. Y. for the second best ewe; silver medal.

Long Wool Lambs—Charles Blackbourn, Bedford, L. I. for the best lamb; silver medal.

Middle Wool Bucks—Obadiah Elliott, Middleham, N. J. for the best buck; silver cup.

Smith Cutter, Shrewsbury, N. J. for the second best buck; silver medal.

Middle Wool Ewes—Smith Cutter, Shrewsbury, N. J. for the best ewe; silver cup.

Middle Wool Lambs—Smith Cutter, Shrewsbury, N. J. for the best lamb; silver medal.

Swine—H. W. Tibbets, Yonkers, Westchester co. N. Y. for the best boar, (Columbia breed;) silver cup.

Charles Starr, Jr. Mendham, N. J. for the second best boar, (Berkshire breed;) diploma.

Charles Starr, Jr. Mendham, N. J. for the best sow, (Berkshire breed;) silver cup.

William Love, Bloomingdale, for the second best sow, (Hampshire breed;) diploma.

H. W. Tibbets, Yonkers, for the best shoat, (Columbia breed;) diploma.

R. F. Aitkin, for four fat hogs; diploma.

James Burling, for a Berkshire sow; diploma.

G. S. West, N. Y. for a Berkshire sow; diplomn.

Dairy Products.

Stephen Yates, Palatine, N. Y. for the best specimen of butter; silver cup.

John A. Smith, Orange co. N. Y. for the second best specimen of butter; diploma.

H. W. Strong, Orange co. N. Y. for a specimen of butter; diploma.

S. Perry, New-York, for the best specimen of cheese; silver cup.

A. B. Ludlam, New-York, for the second best specimen of cheese; diploma.

Poultry.

S. B. Townsend, Newtown, L. I. for very superior Bremen geese and Muscovy ducks; diploma.

Plows and Plowing.

Minor, Horton & Co. Peekskill, N. Y. for the best plow; silver cup.

F. L. Wyckoff, Flatbush, L. I. for the second best plow; silver medal.

Mooers & Slater, Ithaca, N. Y. for the best plowing "done with the side hill and level land plow;" silver cup.

F. L. Wyckoff, Flatbush, L. I. for the second best plowing; silver medal.

Wm. L. Stone, New-York, for the third best plowing; diploma.

Field Crops.

Lambert Wyckoff, Bushwick, L. I., Peter Hultz, gardener, for the best field of cabbages; silver cup.

Garret Vreeland, Bergen, N. J. for a superior field of cabbages; diploma.

Frederick J. Betts, Newburgh, N. Y. for the best field of corn; silver medal.

Richard F. Carman, Fort Washington, N Y. for the second best field of corn; diploma.

Frederick J. Betts, Newburgh, N. Y. for the best field of oats; silver medal.

Agricultural Productions.

George Chesterman, Harlem, for forty ears of superior white Indian corn; three volumes of the Cultivator.

S. Van Valkenburg, Harlem, for forty ears of superior yellow Indian corn; three volumes of New Genesee Farmer.

William P Buel, Albany, for superior specimens of Dutton corn; diploma.

N. N. Wyckoff, Bushwick, L. I. for superior specimens of Tascarora corn; volume of the Cultivator.

Grant Thorburn, Astoria, for superior specimens of Chinese corn; diploma.

Edward R. James, Poughkeepsie, N. Y. for a bushel of white flint wheat; silver medal.

Jeremiah Van Winkle, Bergen, N. J. for superior specimens of Egyptian wheat; diploma.

James De Peyster, Flatbush, L. I. for superior specimens of Egyptian wheat; diploma.

Holt & Owen, 209 Front-street, for a bushel of superior buckwheat; Buel's Farmers' Companion.

Dr. H. A. Field, Third-avenue, for a bushel of superior oats; Downing's Rural Architecture.

Robert L. Pell, Pelham, Ulster co. N. Y. for superior specimens of sweet table corn, and a sample of extra fine wheat; diploma.

R. Harmon, Wheatland, N. Y. for fine samples of wheat, (eleven varieties,) oats, millet, and canary bird seed; diploma.

Vegetables.

John Beekman, Sixty-first-street, S. Ruth, gardener, for the best and greatest variety of culinary vegetables; silver medal.

J. Jones, Hurlgate, for the best and greatest variety of vegetables, cultivated as a field crop; silver medal.

Richard F. Carman, Fort Washington, N. Y., J. Roussett, gardener, for superior specimens of sugar beets; United States Farmer.

M. Hughes, Gowanus, L. I. for superior specimens of mangel wurtzel; Gray's Practical Agriculture.

J. C. Thompson, Tompkinsville, Staten-Island, for superior specimens of Cape Broccoli, &c.; Bridgeman's Gardener's Assistant.

Daniel C. Folk, Newtown, L. I. for superior specimens of drum-head cabbage; Downing's Rural Architecture.

John E. Ross, 225 Thompson-street, for superior specimens of drum-head cabbage; Diploma.

Samuel A. Willoughby, Brooklyn, P. Patterson, gardener, for superior specimens of celery, &c ; Johnson's Agricultural Chemistry.

T. Cremmins, gardener to Thomas Addis Emmet, Seventy-ninth-street, for superior specimens of egg-plants, &c.; Bridgeman's Gardener's Assistant.

Corporation Garden, Blackwell's Island, James Wiggins, gardener, for superior specimens of white and silver skin onions; Buel's Farmers' Companion.

William Van Wyck, Fishkill, N. Y., for superior red and silver skin onions; American Agriculturist.

John Briell, Jersey City, J. Ettringham, gardener, for superior species and varieties of culinary vegetables; Gray's Practical Agriculture.

T. B. Wakeman, Bergen, N. J. for superior specimens of table potatoes; Manning's Work on Fruits.

H. W. Tibbits, Yonkers, for superior specimens of potatoes; Johnson's Agricultural Chemistry.

N. B. Smith, Woodbury, Conn. for superior specimens of potatoes; copy of the Cultivator.

W. J. Townsend, Astoria, L. I. for superior specimens of potatoes and turneps; Gray's Practical Agriculture.

N. N. Wyckoff, Bushwick, L. I. for superior specimens of garden products; Bridgeman's Gardener's Assistant.

N. Wyckoff, Bushwick, L. I. for superior specimens of culinary vegetables; Buel's Farmer's Companion.

Edwin Lord, Staten-Island, John Boyce, gardner, for superior specimens of pumpkins and squashes; Bridgeman's Gardener's Assistant.

Alfred Flock, 616 Broadway, for a superior pumpkins; American Agriculturist.

Joseph Foulk, Hurlgate, S. Johnson, gardener, for an extra large pumpkin; Dana's Muck Manual.

Henry Townsend, Hyde Park, for a superior pumpkin; United States Farmer.

William Hughes, Gowanus, L. I. for superior specimens of cocoanut squashes, &c.; American Agriculturist.

W. Covert, L. I. for superior specimens of garden products; United States Farmer.

E. J. Swords, Bloomingdale, for superior specimens of Smyrna squashes; Johnson's Agricultural Chemistry.

Maurice Cunningham, gardener to Robert L. Pell, Pelham, Ulster co. N. Y. for superior specimens of culinary vegetables; Dana's Muck Manual.

John P. Haff, Fort Lee, N. J. for numerous varieties of garden products; American Agriculturist.

Henry Delafield, Hurlgate, W. Armstrong, gardener, for superior specimens of culinary vegetables; Bridgeman's Gardener's Assistant.

D. N. Demarest, N. J. for two Smyrna squashes and a case of eggs; Dana's Muck Manual.

Sylvester Compter, 28 Barrow-street, for one large pumpkin; diploma.

J. Clowes, Harsimus, N. J. for superior specimens of celery; diploma.

Henry Funnell, L. I. for superior specimens of Russia turnips; volume of New Genesee Farmer.

Fruit.

Wm. P. Buel, Albany, N. Y. for sixty-two varieties of apples; silver medal.

Richard A. Cornwall, 49 Dey-street, for superior specimens of table apples; copy of Kenrick's American Orchardist.

Maurice Cunningham, gardener to Robert L. Pell, Pelham, Ulster co. N. Y. for superior specimens of winter apples; copy of Bridgeman's Gardener's Assistant.

Peter A. Ross, 225 Thompson-street, for superior specimens of apples; copy of United States Farmer.

S. G. Carpenter, 476 Bowery, for superior specimens of apples; Cultivator.

R. T. Underhill, Croton Point, for superior specimens of pippin apples; Bridgeman's Gardener's Assistant.

A. J. Downing & Co. Newburgh, for thirty varieties of pears and fifty varieties of apples; silver medal.

J. P. Mantel, Bloomingdale, for sixty-two varieties of pears and ten varieties of apples; silver medal.

Wm. Reed, corner of Thirty-fourth-street and Fourth-avenue, for superior specimens of table and winter pears; copy of Kenrick's American Orchardist.

W. Mosely, New-Haven, Conn. for superior specimens of winter pears; Bridgeman's Gardener's Assistant.

P. Dickerson, Paterson, N. J. for superior specimens of sickle pears; Kenrick's Orchardist.

Maurice Cunningham, gardener to Robert L. Pell, Pelham, Ulster co. N. Y. for superior specimens of quinces; Kenrick's Orchardist.

R. T. Underhill, Croton Point, for superior specimens of quinces; Gray's Practical Agriculture.

Thos. R. Perkins, Brooklyme, Mass. for eleven superb varieties of foreign grapes; silver medal.

R. T. Underhill, Croton Point, for superior specimens of Isabella and Catawba grapes; Johnson's Agricultural Chemistry.

Matthew Antonides, Brooklyn, for superior specimens of Isabella grapes; Gray's Practical Agriculture.

John P. Haff, Fort Lee, N. J., for superior specimens of field grapes; United States Farmer.

Edward Classen, 219 Delancy-street, for superior specimens of sweet water grapes; Manning's Work on Fruits.

James W. Burtis, Brooklyn, L. I., for superior specimens of grapes; Manning's work on Fruit.

M. Floy, Harlem Nursery, for superior specimens of gooseberries; Kenrick's Orchardist.

Barnum Blake, Franklin, Mass., for superior specimens of cultivated cranberries; American Agriculturist.

Gifford Johnson, N. Y., for two bottles blackberry wine; Florist's Guide.

Flowers.

Isaac Buchanan, corner of Twenty-ninth-street and Third-avenue, for superior specimens of green and hot-house plants, together with a pyramid of dahlias; silver medal.

Samuel M. Cox, Bloomingdale Road, for superior varieties of cut flowers from hot-house plants; Downing's Rural Architecture.

Jeremiah Brown, Brooklyn, for a beautiful bouquet, containing rare flowers; Hovey's Magazine of Horticulture, Botany, &c.

Thomas Hogg, Jr., Twenty-third-street, near Broadway, for superior bouquets of flowers; American Flower Garden Directory.

Richard F. Carman, Fort Washington, N. Y., for superior bouquets of choice flowers; Bridgeman's Gardener's Assistant.

Miss Maria A. Pitcher, Harlem, for superior bouquet of flowers in variety; Bridgeman's Florist's Guide.

George C. Thorburn, 11 John-street, for a rich display of dahlias for two weeks, including an ornamental figure; silver cup.

William Kent, Brooklyn, for superior specimens of dahlias and other flowers; silver medal.

Thomas Hogg, Twenty-third-street, near Broadway, for a rich display of dahlias for two weeks; silver medal.

John Briell, Jersey City, J. Ettringham, gardener, for superior varieties of dahlias and other flowers; Downing's Cottage Arehitecture.

D. Boll, Bloomingdale, for superior varieties of dahlias and other flowers; Downing's Rural Architecture.

Alfred Bridgeman, corner of Eighteenth-street and Broadway, for superior varieties of flowers, including an ornamental framework, Fleur de Lis; American Flower Garden Directory.

Thomas Dunlap, Niblo's Garden, for an ornamental gothic temple decorated with flowers; a volume of Hovey's Magazine of Horticulture, Botany, &c.

D. & W Phelan, corner of Stanton and Forsyth-streets, for superior varieties of dahlais; Buel's Farmer's Companion.

William Russell, Brooklyn, for superior specimens of American seedling dahlias; Downing's Cottage Architecture.

Moses Van Buren, Brooklyn, for superior varieties of dahlias; Bridgeman's Gardener's Assistant.

William Reed, corner of Thirty-fourth-street and Fourth-avenue for superior specimens of dahlias; Manning's Work on Fruit.

Henry Brown, Fifteenth-street, near Fifth Avenue, for superior specimen's of flowers; Bridgeman's Florist's Guide.

William H. Aspinwall, Staten-Island, James Kelly, gardener, for superior specimens of flowers; Bridgeman's Florist's Guide.

Thomas Sprunt, Astoria, for a kite frame of dahlias; Bridgeman's Florist's Guide.

H. Bruen, Perth Amboy, for superior specimens of dahlias; Bridgeman's Florist's Guide.

George Nixon, Staten-Island, for superior specimens of dahlias; Bridgeman's Florist's Guide.

Thomas Manning, Flushing, L. I., W. H. King, gardener, for two bouquets of flowers; Bridgeman's Florist's Guide.

T. Cremmins, gardener to Thomas Addis Emmet, Seventy-ninth-street, for superior specimens of dahlias and other flowers; Bridgeman's Florist's Guide.

Edward Eastmond, 93 Eleventh-street, for two bouquets of dahlias; Bridgeman's Florist's Guide.

Miss Catharine C. Wakeman, Bergen, N. J., for a bouquet of dahlias; Bridgeman's Florist's Guide.

Oscar V. Dayton, Forty-second-street, for a bouquet of flowers; Bridgeman's Florist's Guide.

Grant Thorburn, Jr., 15 John-street, for a bouquet of flowers; Bridgeman's Florist's Guide.

James Le Roy, 41 Ann-street, for superior varieties of dahlias; Bridgeman's Florist's Guide.

William Kent, Brooklyn, Edward White, gardener, for regular supplies of dahlias, &c; Bridgeman's Gardener's Assistant.

Agricultural Implements.

Samuel Pennock, Chester county, Pa., for the best drilling machine; silver medal.

Botts & Burfoot, Richmond, Va., for the best straw and stalk cutter; silver medal.

John Standish, Fishkill Landing, for an excellent straw cutter; diploma.

Philip H. Kells, Claverack, Columbia county, N. Y., for an excellent straw cutter; diploma.

John Moore, 31 Fulton-street, for the best corn-sheller; diploma.

Calvin Olds, for an excellent corn planter; diploma.

George Page, Baltimore, Md., for an excellent corn planter; diploma.

Collins & Stone, Ohio, Kennedy, Barry & Way, agents, 231 Pearl street, for a novel and good cheese press; diploma.

H. Branch, 26 Fulton-street, Brooklyn, for a good machine for breaking hemp and flax; diploma.

Valentine Birely, Baltimore, Md., for a machine for crushing corn in the cob for feed; diploma.

Mark Poole, 72 Main-street, Brooklyn, for three garden syringes; diploma.

H. Tower & Co., Milbury, Mass., for specimens of garden hoes; diploma.

Edward Townley, 75 Thompson-street, for nine good bee-hives; (silver medal having been before awarded:) diploma.

W. H. Oliver, for superior wire garden stands; Buel's Farmer's Companion.

Book Binding.

Root & Wheeler, 57 Wall-street, for specimens of blank books, (Russia binding;) diploma.

Edward G. Taylor, 128 Fulton-street, for beautiful designs on books; diploma.

D. Appleton & Co., Broadway, for specimens of fancy binding; diploma.

H. & S. Raynor, 76 Bowery, for handsome specimens of binding on prayer books; diploma.

P. Hogan, 74 Maiden-lane, for the best specimen of ruling pens; diploma.

John S. Campbell, Springfield, N. J., for beautiful specimens of binder's boards; diploma.

Gentlemen's Boots.

S. D. Hayden, 52 Ferry-street, for a very superior specimen of pegged boots; diploma.

Ladies' Boots and Shoes.

Benjamin Shaw, 71 Canal-street, for the best specimen of ladies' satin slippers; diploma.

Peter Laboyteaux, 71 Chambers-street, for the best specimen of ladies' gaiter boots; silver medal.

Benjamin Shaw, 71 Canal-street, for the second best specimen of ladies' gaiter boots; diploma.

Peter Laboyteaux, 71 Chambers-street, for the best specimen of ladies' cork sole shoes; diploma.

Tuttle & Hayward, 289 Broadway, for the second best specimen of ladies' cork sole shoes; diploma.

Tuttle & Hayward, 289 Broadway, for a very superior quilted cork sole boot; silver medal.

Bridges.

Isaac Damon, Northampton, Mass., for the best model of a bridge; silver medal.

Brushes.

James H. Noe, 187 Greenwich-street, for the best specimen of brushes; diploma.

James T. Barnes, 255 Pearl-street, for the second best brushes; diploma.

Cabinet Ware.

Francis M. Drew, 450 Broome-street, for two center tables, the best specimen of workmanship; diploma.

G. H. Balter, 30 Pearl-street, for a globe work-stand, the second best specimen of workmanship; diploma.

N. McGraw, 463 Broadway, for extension sofas and rocking chairs, for workmanship and the principle on which they are constructed—(silver medal having been before awarded;) diploma.

Abraham Storm, 455 Broadway, for an invalid bedstead, for its utility; diploma.

John V. Brower, 95 North Moore-street, for a bureau bedstead, for cheapness and convenience; diploma.

Henry Parsons, 598 Broadway, for an ottoman bedstead, &c.; silver medal.

Thomas H. Brown, 54 Twelfth-street, for two mahogany doors; diploma.

Samuel S. Parker, 156 and 158 Greenwich-street, for wardrobe bedstead; diploma.

John D. Cordes, 159 Centre-street, for extension tables; diploma.

M. W. King, 455 Broadway, for revolving and rocking chairs; diploma.

William Shaw, Sing-Sing, for an invalid chair; diploma.

Elisha Van Brunt, 71 Green-street, for an oak chair; diploma.

M. B. Wentworth, 445½ Pearl-street, for an inlaid fancy work-box; diploma.

David T. Lusk, 109 Bridge-street, Brooklyn, for a fancy work-box; diploma.

Charles M. Wilson, 325 Broadway, for a writing desk; diploma.

Elisha Waters, Jr., Troy, N. Y., for a fancy stand and work-box; diploma.

William Graham, 46 Hester-street, for a work-box; diploma.

William F. Smith, apprentice, 37 King-street, for a fancy work-box; diploma.

Honey & Co., 131 Mott-street, for fancy and cabinet work-boxes; diploma.

C. Sutton & Co., Eastchester, N. Y., for superior corundum paper; diploma.

J. P. Gage, Thirty-seventh-street, for superior corundum paper; diploma.

Caps.

E. F. Brigham, 126 Maiden Lane, for fine specimens of fancy caps; diploma.

Carriages and Sleighs.

J. D. W. Wemple, Albany, for the best double sleigh; silver medal.

Sparling & Beatty, 264 Elizabeth-street, for the best single sleigh; diploma.

E. T. Smith, Smithtown, N. Y., for the best light wagon; diploma.

John H. Sickles, 97 Clinton-street, for the second best light wagon; diploma.

Horace Wood, Greenwich, N. Y., for an improved wagon; diploma.

William Westerfield, — Prince-street, for a spring cart; diploma.

James M. Quimby, Newark, N. J., for a sulky, (a good article;) diploma.

Henry G. Guyon, 31 Charlton-street, for cast iron sleigh runners, for wheel vehicles; diploma.

George Dunn, Newark, N. J., for coach and sulky railings, and dash frames—(a silver medal having been before awarded;) diploma.

John Rutan, Newark, N. J., for a set of harness; diploma.

Charles Lewis & Son, 108 Reade-street, for coach wrenches; diploma.

Carving, &c.

W. S. Conely, 19 Essex-street, for a superior picture frame; diploma.

Castings.

John Savery & Son, 113 Beekman-street, for the best specimen of hollow ware; silver medal.

Jordan L. Mott, 264 Water-street, for the best cast iron garden vases; silver medal.

M. Algier, Boston, Mass., for specimens of small machinery castings, (three bevel wheels;) diploma.

W. T. Peterson, 144 Bowery, for a small cast iron vase; diploma.

J. L. Mott, 264 Water-street, for specimens of cast iron bathing tubs; silver medal.

Clocks and Watches.

Aaron D. Crane, Newark, N. J., for a 376 day clock; (has been fully tested;) silver medal,

Eggert & Son, 239 Pearl street, for superior chronometers; (gold medal having been before awarded;) diploma.

Albert Eppner, 59 John street, for a duplex escapement watch, on a new plan; diploma.

Clothing.

Hayden & Taylor, 69 John-street, for a beaver cloth overcoat, the best specimen of ready made clothing; diploma.

Olssen & Durbrow, 74 Bowery, for the second best specimen of ready made clothing; diploma.

Geo. W. Ward, Philadelphia, for a beautiful specimen of stocks; diploma.

Thos. Oliver, 167 Broadway, for a tailor's square and book, the best system for drawing garments; diploma.

Cotton Goods.

Joseph S. Gladding, Plainfield, Conn., Adams & Tiffany, agents, 75 Pine-street, for the best specimen of brown sheetings; diploma.

Bartlett Steam Mills, Newburyport, Mass., Sam'l J. Beals & Co. agents, 54 Pine-street, for the second best specimen of brown sheeting; diploma.

Bartlett Steam Mills, Newburyport, Mass., Sam'l J. Beals & Co. agents, 54 Pine-street, for the best specimen of bleached sheetings; (silver medal having been before awarded;) diploma.

Joseph Gladding, Plainfield, Conn., Adams & Tiffany, agents, 75 Pine-street, for the best cotton diaper; diploma.

J. Dunnell & Co., Providence, R. I., Fearing & Hall, agents, 33 Exchange Place, for the best specimen of printed chintz; diploma.

Andrew Robeson & Sons, Fall River, Mass., W. C. Langley & Co., agents, 64 Pine-street, for the second best specimen of chintz prints; diploma.

Wm. Stevens, Newark, N. J., for superior specimens of cotton shirts and drawers; diploma.

Dentistry.

James Alcock, 4 Murray-street, for the best incorruptible teeth; (silver medal having been before awarded;) diploma.

Warren Rowell, 149 Madison-street, for an ingenious construction of an artificial palate; diploma.

Dies and Engravings.

Charles Harrison, 210 Sixth-avenue, for the best specimen of card engraving; diploma.

Draper, Toppan & Co., 16 Wall-street, for the best specimen of bank-note engraving; diploma.

Aaron Lewenburg, 158 Fulton-street, for the best specimen of cameo cutting; diploma.

S. Ellis, 176 Twelfth-street, for the second best cameo cutting; diploma.

Herman Griffin, 114 Nassau-street, for the best specimen of book ornamental side stamps; diploma.

B. J. Lossing, 13 Chambers-street, for the best specimen of wood engraving; (silver medal having been before awarded;) diploma.

Thos. W. Strong, 156 Fulton-street, for the second best specimen of wood engraving; diploma.

Wm. Howland, apprentice, 13 Chambers-street, for a specimen of wood engraving; diploma.

Drugs and Chemicals.

Smith Gardner, for a specimen of white lead ground in oil; diploma.

Saugerties White Lead Co., for a specimen of white lead ground in oil; diploma.

Wentworth & Co., 51 Fulton-street, for the best specimen of paste blacking; diploma.

Lewis Francis, corner of William-street and Maiden-lane, for the best specimens of black, blue and red writing ink; diploma.

J. C. Colin, for the best indelible ink; diploma.

G. T. Gilbert, Bridgport, Conn., for the best leather preservative compound; silver medal.

Angus Gunn, Bergen, N. J., for extract of indigo, a valuable article; diploma.

Southwick & Prior, 64 Pearl-street, for superior sample of blue mass; silver medal.

Peter Cooper, New-York, for beautiful specimens of refined American isinglass, (silver medal having been before awarded;) diploma.

E. Coutaret, 62 Cannon-street, for sample of bleached shellac; diploma.

H. Gifford & Co., Syracuse, New-York, for superior specimens of coarse solar salt; diploma.

M. D. Burnet & Co., Syracuse, N. Y., for ground solar dairy salt; diloma.

S. W. Cadwell, Syracuse, N. Y., for refined table salt; diploma.

W. K. Blair, Syracuse, N. Y., for common fine salt; diploma.

Findlay, Mitchell & Co., Saltville, Va., for salt from Virginia mines, and fine steam table salt; diploma.

Renwick & Battelle, N. Y., for superior samples of Epsom salts, alum and copperas; diploma.

Chas. N. Farnham, Roxbury, Mass., for a beautiful sample of Epsom salts; diploma.

Lewis Francis, corner of Maiden-lane and William-street, for very superior quality of indestructible ink; silver medal.

T. & T. Hyatt, corner of Pearl and John-streets, for water-proof friction matches; silver medal.

A. Golsh, for friction matches made without sulphur; diploma.

Edge Tools and Cutlery.

J. Russell & Co., 6 Liberty-street, for the best specimen of table knives; silver medal.

Homer Foote & Co., Springfield, Mass., for specimens of spring dividers; diploma.

Broomhead & Hattersley, New-Haven, Conn., for the best specimen of razors and small cutlery; diploma.

John C. Nixon, 70½ Bowery, for the second best specimen of cutlery; diploma.

Bradley Beecher & Co., Naugatuck, Conn., for specimens of pocket cutlery; diploma.

Leonard & Wendt, 29 and 31 Gold-street, for superior specimens of tailor's shears; (silver medal having been before awarded;) diploma.

Thomas J. Sloan, 110½ Bowery, for a superior specimen of tailor's shears; diploma.

John Ames, North Easton, Mass., for the best specimens of shoe knives; diploma.

Broomhead & Hattersley, New-Haven, Conn., for the best specimens of files; diploma.

Elliott Beardsley, Winchester, Conn., N. R. Long, agent, 14 Platt-street, for the best grass and grain scythes; silver medal.

Franklin & Miller, 95 Maiden-lane, for superior specimens of pump augers; diploma.

J. L. & N. Churchill, Hamden, Conn., Davenport & Quincey, agents, 81 John-street, for the best specimens of augers; diploma.

Dwight & Foster, New-Haven, Conn., for specimens of augers, (a silver medal having been before awarded;) diploma.

Horace M. Pool, Easton, Mass., Mitchell & Wetherell, agents, New-York, for excellent plumb levels; diploma.

Job Johnson & Son, Malbonville, Brooklyn, N. Y., for specimens of fish hooks; diploma.

William Buskinshaw, Jersey City, for highly finished gauges; diploma.

George Saunders, 163 Broadway, for superior specimens of razor strops; diploma.

Fancy Articles.

Mrs. B. R. Voorhies, Amsterdam, N. Y., for the best embroidery on cloth, (a shawl;) diploma.

Mrs. James Stewart, for the second best embroidery on cloth, (a piano cover;) diploma.

Miss Frances L. Baldwin, 168 Grand-street, for the best specimen of embroidery on canvass; diploma.

Miss M. Whitlock, 634 Broadway, for the second best specimen of embroidery on canvass; diploma.

Miss Eliza Teller, 349 Bowery, for the best specimen of embroidery on silk; diploma.

Miss L. B. Hazen, Little-Falls, for the second best specimen of embroidery on silk; diploma.

Miss Rosina Warswick, 2 Front-street, for specimen of needlework on silk, in imitation of engraving; diploma.

Miss M. Toll, 201 Elm-street, for specimens of fancy embroidery with silk and beads; diploma.

Miss M. Hamilton, 206 Hudson-street, for a specimen of gold embroidery on cloth; diploma.

Miss Hetty McIntosh, Cherokee Nation, for two chieftain's belts; diploma.

Mrs. Abel White, Norwich, N. Y., for specimens of thread lace; diploma.

Miss Jane Smith, Brooklyn, for specimens of needle work; diploma.

Miss Martha M. Comstock, 242 Twelfth-street, for the best specimen of shell-work; diploma.

Miss Martha Earl, 426 Bowery, for the second best specimen of shell-work; diploma.

Miss Eliza Webb, 80 Morton-street, for the best specimen of lace knitting; diploma.

Mrs. R. Edwards, Baltimore, for knitting a pair of white worsted socks, diploma.

Mrs. Susan Miller, Hanover, N. J., for knitting four pair cotton stockings; diploma.

Parsells & Agate, 241 Broadway, for the best made linen; diploma.

William F. Marshall, 90 Chatham-street, for the second best made linen; diploma.

Mrs. Eliza E. Brown, 195½ Hudson-street, for the best made corsets; diploma.

Miss L. C. Hankinson, 348½ Hudson-street, for the best specimen of dress making; diploma.

Juvenile Society, Manchester, Vt., for a beautiful silk quilt; diploma.

Mrs. Maria Smith, Derby, Conn., for the second best quilt; diploma.

Mrs. Elizabeth Blank, West Farms, for a down quilt; diploma.

Miss Laura B. Hazen, Little-Falls, N. Y., for a hat and cape made from the milk weed; diploma.

Miss A. Reed, 2 Burton-street, for the best specimen of wax flowers; diploma.

Miss Louisa J. Hazlet, 94 Sixth-avenue, for the best specimen of worsted flowers; diploma.

Fancy Goods, Combs, &c.

George R. Cholwell, 79 William-street, for beautiful specimens of pocket books and card cases; diploma.

John Harrop, 35 Walker-street, for the best specimen of tortoise shell work; diploma.

D. Newell, 637 Broadway, for excellent tortoise shell combs; diploma.

Sweet, Nichols & Shield, Wappinger's Creek, N. Y., for superior finished horn combs; diploma.

John S. Caulkins, 2 Astor House, for excellent specimens of walking canes; diploma.

Fine Arts.

J. A. McDougall, 11 Park Place, for the best specimen of miniatures; diploma.

A. S. Southard & Co., Boston, for the best specimens of daguerreotype; diploma.

Charles E. Johnson, Albany, for the second best specimens of daguerreotype; diploma.

Carse & West, 472 Pearl-street, for the best specimen of glass staining, (silver medal having been before awarded;) diploma.

Thomas Thomas, 136 Spring-street, for the second best specimen of stained glass; diploma.

George Harvey, Dobb's Ferry, N. Y., for atmospheric views of American scenery, (silver medal having been before awarded;) diploma.

Hannah N. Collins, for the best painting of flowers; silver medal.

E. Whitfield, Albany, for the best painting of fruit; silver medal.

Eliza J. Burr, for painting of flowers; diploma.

James Thom, Dey-street, for a splendid sun-dial; silver medal.

Benj. Pike & Sons, for a marble sun-dial; diploma.

Henri Heideman, New-York, for the best lithographic portraits; diploma.

John T. Bowen, Philadelphia, for the best lithography of animals; diploma.

E. W. Smith, 484 Cherry-street, for the best machine drawing; diploma.

F. J. Swinton, Staten-Island, for a drawing of a cottage and church in water colors; silver medal.

Miss Catharine Rainsford, 430 Houston-street, for a pencil drawing; diploma.

Fire Arms.

J. G. Bolen, 104 Broadway, for the best specimen of self-cocking revolving pistols, (for originality of invention;) (silver medal having been before awarded;) diploma.

Blunt & Syms, 45 Chatham-street, for the second best specimen of self-cocking revolving pistols, (ingenuity of improvement;) diploma.

Fire Works.

Isaac Edge, Jr., Jersey City, for a pyrotechnic display; diploma.

Glass, China, and Earthenware.

Lambert & Croquet, 29 Spruce-street, for the best specimen of painting on China; diploma.

George Wightman, 561 Broadway, for the best specimen of cut-glass; diploma.

J. Stouvenel & Co., 35 John-street, for the second best specimen of cut-glass; diploma.

American Pottery Manufacturing Co., Jersey City, for the best specimen of crockery ware; silver medal.

Florence Braid, Straw, and Amazone Hats.

Leland & Mellen, 171 Pearl-street, for the best specimen of Florence braid bonnets; diploma.

Mrs. E. W. Simons, 294 Bowery, for the second best specimen of Florence braid bonnets; diploma.

F. & E. White, 22 High-street, Brooklyn, for superior specimens of 7 and 11 braid bonnets; diploma.

Mrs. J. W. Burtis, 130 Fulton-street, Brooklyn, for very fine Tuscan hats; diploma.

Henry Valentine, 137 Grand-street, for specimens of Amazone bonnets; (gold medal having been before awarded;) diploma.

Fur and Silk Hats.

W. H. Bebee & Co., 178 Broadway, for the best specimen of Nutria hats; diploma.

Orlando Fish, 137 Broadway, for the second best specimen of Nutria hats; diploma.

Francis Degen, 9 Gold-street, for the best specimen of silk hats; diploma.

W. H. Beebe & Co., 178 Broadway, for the second best specimen of silk hats; diploma.

E. Mullen, 255 Bowery, for the best fur and silk military hats; diploma.

Joseph Fletcher, 4 Wall-street, for the second best silk military hat; diploma.

Household Utensils.

Leonard, Reed & Barton, Taunton, Mass., Mitchell & Wetherell, agents, 91 John-street, for the best specimen of Britannia ware; (gold medal having been before awarded;) diploma.

Thomas Wildes, 302 Mulberry-street, for the second best specimen of Britannia ware; diploma.

J. & G. Lightbody, 75 Market-street, for the best brass teakettle; diploma.

Francis Gallagher, 195 Mott-street, for the best copper teakettle; diploma.

William G. Darby, 30 Cherry-street, for the best oval brass teakettle, and coal-hod; diploma.

Edward Smylie, — Rivington-street, for the best brass andirons; diploma.

Henry Balaster, 100 Elizabeth-street, for the best hat stand; diploma.

John Taylor, 4 Little Green-street, for the best bird cages; diploma.

Moses Heler & Brother, 87 Eldridge-street, for the best specimen of stair rods; diploma.

T. Thomas & Son, 63 Nassau-street, for the best tin vessels; diploma.

N. Godart, 154 Broadway, for the best willow baskets; diploma.

George F. Wiegand, 65½ Bowery, for winter indispensables, or feet warmers; diploma.

India Rubber Goods.

Horace H. Day, 45 Maiden-lane, for the best specimen of water proof garments, (cloth of American manufacture;) diploma.

S. C. Smith & Sons, 66 Chatham-street, for the second best specimen of water proof garments, (cloth of American manufacture;) diploma.

J. Horbelt, 76 Pitt-street, for the best specimen of hemp or canvass hose for conducting water; diploma.

Amasa Stone, Philadelphia, Horace H. Day, agent, 45 Maiden-lane, for the second best specimen of hemp or canvass hose for conducting water; diploma.

Horace H. Day, for the best India rubber, or water proof cloth hose; diploma.

S. C. Smith & Sons, 66 Chatham-street, for the second best specimen of India rubber, or water proof cloth hose; diploma.

L. Candee, New-Haven, Conn., for excellent specimens of India rubber and silk elastic suspenders; diploma.

Horace H. Day, 45 Maiden-lane, for the best specimen of India rubber and water proof over shoes; diploma.

Daniel Hodgman, 25½ Maiden-lane, for the best India rubber shoes; diploma.

Briggs & Penman, 47 Christopher-street, for specimens of water proof goods; diploma.

William J. Spence, 60 Fulton-street, for specimens of water proof cloth; diploma.

Lamps and Chandeliers.

William H. Starr, 67 Beekman-street, for the best specimen of chandeliers; silver medal.

Cornelius & Co., Philadelphia, Woram & Haughwout, agents, for beautiful specimens of girandoles and astral lamps; (silver medal having been before awarded;) diploma.

William H. Starr, 67 Beekman-street, for the best portable lamps; diploma.

F. H. Southworth, for the best lard lamps; diploma.

Leather.

James Palen, 10 Jacob-street, for the best specimen of sole leather; silver medal.

J. R. Smith, 17 Jacob-street, for the best specimen of morocco; silver medal.

P. N. Griffin & Co. 21 Jacob-street, for the second best specimen of morocco; diploma.

George Watts, 26 Ferry-street, for the best specimen of colored morocco; diploma.

J. R. Smith, 17 Jacob-street, for the best specimen of cream skivers; diploma.

J. Hochstrasser, Albany, for specimens of patent leather; diploma.

Augustus H. Bruyn, Kingston, Ulster co. N. Y. for specimens of calf skin; diploma.

Locks and Door Springs.

John Day, 589 Broadway, for the best changeable lock, and superior finished locks; (gold medal having been before awarded;) diploma.

James Kyle, 96 Hammond-street, for the second best changeable lock; diploma.

Gerard Sickels, Middletown, Conn. for a patent door spring; diploma.

N. A. Fisher, 29½ Division-street, for a door spring; diploma.

William Wilson, Northampton, Mass. for a lock with worm spring, (a new principle as regards safety;) diploma.

Abraham Brown, 589 Broadway, for a well finished sliding door lock; diploma.

H. C. Jones, Newark, N. J. for safe padlocks; diploma.

Thomas L. Pye, 45 Cannon-street, for an upright front door lock; diploma.

W. H. Carr, Philadelphia, for very superior butt hinges; silver medal.

James Stone, 390 Broadway, for improved spring hinges; diploma.

N. C. Sanford, Meriden, Conn. for superior case of skates; diploma.

Machinery, Models, &c.

C. H. Eisenbrandt, Baltimore, for a printing press for the blind; diploma.

James F. Starrett, 354 Fifth-street, for a submerged paddle wheel; silver medal.

G. W. Hildreth, Lockport, N. Y. for a canal lock gate, (of great durability;) diploma.

Richard M. Hoe, 93 Henry-street, for a screw bolt machine; silver medal.

Stillman & Co. Novelty Works, for an iron planing machine; gold medal.

Samuel Raub, Washington, D. C. for a self-acting safety valve; diploma.

Abraham Van Pelt, Bedminster, N. J. for a tanning machine; silver medal.

Linus Yale, Newport, Herkimer co. N. Y. for self-setting saw mill dogs; diploma.

D. H. Southworth, Newburgh, for the best smut machine; (gold medal having been before awarded;) diploma.

Leonard Smith, Troy, N. Y. for the second best smut machine; diploma.

D. H. Southworth, Newburgh, for a smut and garlic machine, (an improvement on that for which a gold medal has been before awarded;) diploma.

Stillman & Co. Novelty Works, for a steam engine; (gold medal having been before awarded;) diploma.

Horatio Allen, New-York, for an expansion valve; silver medal.

Chauncey Andrews, Paterson, for a tide and current water wheel; diploma.

Chauncey Andrews, Paterson, N. J. for excellent specimens of bobbins; (silver medal having been before awarded;) diploma.

McDougall & Co. corner of Wall and Front-streets, for the best platform scale; diploma.

E. & T. Fairbanks & Co. St. Johnsbury, Vt. for the second best platform scale; diploma.

Josiah Platt, Bridgeport, Conn. for a portable grist mill; diploma.

Prentiss & Page, 40 Eldridge-st., for a portable grist mill; diploma.

S. W. Bullock, Catskill, N. Y. for the best cotton press; diploma.

Wm. Bullock, Jersey City, for a combination power press, (the best for hay;) diploma.

W. S. Jacks, Catskill, N. Y. for a level rail-way press, the second best for hay; diploma.

Thos. E. Daniels, Worcester, Mass., for a wood planing machine; diploma.

C. T. James, Newburyport, Mass. for an improved dynamometer; (silver medal having been before awarded;) diploma.

Paul Stillman, Dry Dock, for a pressure gage for steam-engines; diploma.

John McNally, 195 Fulton-street, for a mill for crushing sugar; diploma.

W. &. W. H. Lewis, 28 Catharine-street, for a machine for pressing straw hats; diploma.

P. H. Dreyer, 58 Cortland-street, for a dovetail grooved rail and fastenings; silver medal.

S. E. Sackett, Boston, for a machine for making braid; diploma.

Tatham & Brothers, 249 Water-street, for the best rotary pump; diploma.

Z. Lumbard, Springfield, Mass. for the second best rotary pump; diploma.

E. H. Pennoyer, Harlem, for a spoke planing machine; diploma.

Samuel. Frew, Alleghany co. Pa. for a hotel telegraph; diploma.

John Chilcott, 46 Fulton-street, for a boot crimper; diploma.

Martin N. Armstrong, 146 Wooster-street, for a knife-cleaning machine; diploma.

William Mullane, 82½ Nassau-street, for a garden engine; diploma.

L. D. & J. Walter, Fort Plain, N. Y. for a screw machine; diploma.

W. & B. Douglass, Middletown, Conn. for revolving stand pumps; diploma.

Danl. Fitzgerald, 85 Christie-street, for a cocoanut cutting machine; diploma.

William A. Browning, Matteawan, N. Y. for machine cards; diploma.

J. H. Bull, 174 Elm-street, for a coal ash sifter; diploma.

Henry Nelson, 240 Third-avenue, for water tuyers for smiths; diploma.

Henry Nelson, 240 Third-avenue, for specimens of forging, (picks and sledges;) diploma.

J. M. Frisbee, New-Haven, Conn., for the best carriage axles; diploma.

Harrison & Breese, for the second best carriage axles; diploma.

Smith Cram, 54 Laight-street, for a pile driving and grading machine, (gold medal having been before awarded;) diploma.

Sawyer & Hobby, 156 Water-street, for Croton water cocks; diploma.

Mahlon Gregg, Philadelphia, for a tenon machine; diploma.

Wm. W. Stone, 90 Rivington-street, for a shoemaker's assistant; diploma.

A. M. Foster, 214 Delancey-street, for a drill stock and pad; diploma.

L. B. Ward & Co., Thirty-ninth-street for a large wrought iron shaft; gold medal.

John S. Worth, 35 Spruce-street, for self-acting rotary temples; silver medal.

Wm. Van Schaick, Montgomery co. N. Y., for the best washing machine; diploma.

Wm. Sharp, 61 Beekman-street, for the second best washing machine; diploma.

J. L. Brown & Co. 83 Fulton-street, for splendid bank scales; diploma.

M. V. B. Douglass, Middletown, Conn., for screw couplings; diploma.

Thos. I. Woodruff, Newark, N. J. for a set of fire engine wheels; diploma.

John De Coudres, 20 Corlears-street, for a horizontal model engine; diploma.

Hoe printing press and saw manufactory, for saws of various descriptions, (gold medal having been before awarded;) diploma.

Calvin Emmons, for a water-wheel, (silver medal having been before awarded;) diploma.

E. Kingsland, Essex N. J., for the best specimen of cut nails, (silver medal having been before awarded;) diploma.

J. & G. C. Alexander, Sable Iron Works, 80 Front-street, for the second best specimen of cut nails; diploma.

H. H. & J. Gardiner, Pa., for a specimen of boiler iron; diploma.

N. Scholfield, Norwich, Conn., for a water-wheel regulator; diploma.

New-England Screw Co. Providence, R. I. Mitchell & Wetherell agents, 94 John-street, for specimens of wood screws; diploma.

J. D. Johnson, Waterbury, Conn., for an admirable specimen of rolled brass and copper wire; silver medal.

Lansing E. Hopkins, 2 Willett-street, for the best steam boiler, (silver medal having been before awarded;) diploma.

R. V. De Witt, Albany, N. Y., for the second best steam boiler; diploma.

James Hamilton, 157 Crosby-street, for sawing machines, (gold medal having been before awarded;) diploma.

Henry McCullum, 87 Eldridge-street, for the best cracker machine; diploma.

Bruce Brothers, Jersey City, for the second best cracker machine; diploma.

James Bogardus, 87 Eldridge-street, for a white lead mill, (gold medal having been before awarded;) diploma.

J. L. Brown & Co., 83 Fulton-street, for a beautiful set of prescription scales; diploma.

Patent Nail Co., 60 Gold-street, for an excellent nail engine, (silver medal having been before awarded;) diploma.

John Lewis, 63½ Division-street, for a fluting iron; diploma.

A. P. Houghton, 341 Broome-street, for specimens of screw tools; diploma.

J. Williams, Jr. Salem, Washington co., N. Y., for a dynamometer; diploma.

Philip H. Kells, Claverack, Columbia co., N. Y., for a horse power machine; diploma.

J. L. Haines, 95 Third-avenue, for a dentist's lathe; diploma.

Truman Cook, 142 Second-street, for a novel method of propelling boats; diploma.

Cornelius Kanouse, Jersey City, for an improved rail-road track; diploma.

J. P. Pirsson, jr. for a hydrostatic engine, (an ingenious machine;) diploma.

Tatham Brothers, 249 Water-street, for superior lead pipe; diploma.

Silk Machinery.

William Naylor & Son, 522 Broadway, for a silk doubler and winder; silver medal.

Mathematical and Philosophal Instruments.

S. F. B. Morse, 136 Nassau-street, for an electro-magnetic telegraph, the best specimen of philosophical and mathematical instrument; gold medal.

William Gregg, 179 Water-street, for superior workmanship on an equatorial telescope; silver medal.

Charles McAuley & Co. 96 Hudson-street, for a window curtain; diploma.

Abraham F. Haviland, 286 Greenwich-street, for specimens of palliasters, hair mattresses and pillows; diploma.

John A. Miller & Co. for very superior specimens of hair cloth, (silver medal having been before awarded;) diploma.

Paper, Stationery and Printing Materials.

Hudson & Co. Hartford, Conn. White & Sheffield, agents, 45 Maiden-lane, for the best specimen of writing paper; silver medal.

Emanual Henriques, New-Haven, Conn. for the second best specimen of writing paper; diploma.

Amos Sands, 14 Forsyth-street, for the best specimen of tissue paper; silver medal.

James Bafford, Bloomfield, N. J. for the second best specimen of tissue paper; diploma.

Charles E. Delong, Utica, N. Y. for superior specimens of parchment; diploma.

Blanc & Boden, 74 Fulton-street, for superior specimens of colored paper; diploma.

Levi Brown, 10 Front-street, Brooklyn, for the best specimen of gold pens, (silver medal having been before awarded;) diploma.

A. G. Bagley, 1 Front-street, Brooklyn, for excellent specimens of gold pens; diploma.

C. C. Wright & Co. 17 Ann-street, for the best specimen of steel pens; silver medal.

Josiah Hayden, Haydenville, Mass. for the second best specimen of steel pens; diploma.

Allen McKeachnie, 257 Pearl-street, for very superior manufactured quills; diploma.

John S. Campbell, Springfield, N. J. for specimens of cloth and wrapping papers; diploma.

George Bruce & Co. 13 Chambers-street, for very superior specimens of type; silver medal.

Blanc & Boden, 74 Fulton-street, for specimens of embossing and printing in gold; diploma.

Elihu Geer, Hartford, Conn. for specimens of letter-press card printing; diploma.

Joseph Brooks, 57½ Bowery, for a model of a card printing press; diploma.

Wells & Webb, 42 Ann-street, for a convenient case for job printers; diploma.

Northrup, Pomeroy & Crosby, Cortlandville, N. Y. for a very ingenious printing press; diploma.

Perfumery.

John Lindmark, 88 Chatham-street, for the best sample of Cologne water, (silver medal having been before awarded;) diploma.

Navy Yard, Brooklyn, for the best specimens of naval architecture, (sloop of war, 16 guns;) silver medal.

Navy Yard, Brooklyn, for the second best specimens of naval architecture; diploma.

Francis Parmerton, 10 Stone-street, for a model of a race boat; diploma.

William Crolius, 400 Water-street, for the best model of a club-boat; silver medal.

C. L. Ingersoll, 406 Water-street, for a superior thirty foot race boat, (Cymbria;) diploma.

Henry R. Roberts, Stephen Roberts, Charles Thomas and William Godkins, rowers, and Michael Burns, coxswain, for good rowing in boat G. W. Chapman; gold medal.

John Conner, New-York, for good pulling with a single pair of sculls; diploma.

C. L. Ingersoll, 406 Water-street, for the fastest rowing boat, (G. W. Chapman;) silver medal.

William Moore, for a fast pulling boat, (Rainbow,) built by Crolius; diploma.

C. L. Ingersoll, 406 Water-street, for a fast sailing boat, (Troubler;) gold medal.

William Crolius, 400 Water-street, for a fast sailing boat, (Fashion;) diploma.

Hankins & Fish, 285 Front-street, for a fast sailing boat, (Fish;) diploma.

John A. Pearsall, 402 Water-street, for splendid specimens of oars; diploma.

J. Webber & Son, Roxbury, Mass. for the best coil of rope; diploma.

John Thursby, Bushwick, L. I. for rope and bed cords; diploma.

E. Faxon, Jr. & Co. Stonington, Conn. for a coil of whale line; diploma.

Oil Cloth.

New-Jersey Oil Cloth Manufacturing Co. Elizabethtown, N. J. for superior specimens of oil cloth, (silver medal having been before awarded;) diploma.

Sign Painting and Imitations.

Ackerman & Miller, 127 Fulton-street, for the best specimen of sign painting; diploma.

George Clark, 608 Broadway, for a neat specimen of graining on a table; diploma.

Paper Hangings, Upholstery, &c.

Howell & Brothers, Philadelphia, for the best specimen of paper hangings; silver medal.

Joseph Dancourt, 240 Pearl-street, for the second best specimens of paper hangings; diploma.

George Johnson, 18 Cliff-street, for a double syphon, for heating water baths; diploma.

J. A. Powers, 348 Broadway, for mathematical tables, &c., and a lightning conductor; diploma.

Frye & Shaw, 222 Water-street, for the mode of adjusting the hairs of a transit instrument, (silver medal having been before awarded;) diploma.

New-England Glass Co. Boston, Mass., for discs of flint glass, suited for the manufacture of lenses for acromatic telescopes; diploma.

Musical Instruments.

Firth & Hall, 1 Franklin-square, for the best specimen of flutes; diploma.

William Mitchell, 26 Vandam-street, for the second best specimen of flutes; diploma.

Firth & Hall, 1 Franklin-square, for the second best specimens of guitars; diploma.

Schmidt & Maul for the second best specimens of guitars; diploma.

Daniel L. Jones, 499 Pearl-street, for an improvement on the Cambrian harp; silver medal.

Preparations of Natural History.

J. G. Bell, 293 Broadway, for the best specimens of stuffed birds, (silver medal having been before awarded;) diploma.

Abraham F. Haveland, 286 Grand-street, for the second best specimen of stuffed birds; diploma.

J. M. Mott, 10 White-street, for a case of insects; diploma.

Charles M. Wheatley, 323 Canal-street, for the best specimen of minerals; diploma.

Edward H. Burger, 34 Market-street, for a case of minerals; diploma.

John J. Alston, 244 Broome-street, for two cases of stuffed birds; diploma.

George Woods, 263 Broome-street, for a case of stuffed birds; diploma.

John Gray, 223 Division-street, for specimens of artificial eyes for prepared birds and animals; diploma.

Naval Architecture and Nautical Experiments.

Samuel Colt, New-York, for his successful blowing up of a brig off Castle Garden, on the 18th October; diploma.

Joseph Francis, New-York, for a life-boat, (gold medal having been before awarded;) diploma.

Horace H. Day, 45 Maiden-lane, for a life settee; silver medal.

Mons. Guerin, 16 Broad-street, for improved life preservers; silver medal.

Captain C. H. Marshall, for a jury rudder; silver medal.

Thomas Godwin, for a machine for taking soundings, (silver medal having been before awarded;) diploma.

John Wyeth, 69 Barclay-street, for excellent specimens of perfumery; diploma.

John Lindmark, 88 Chatham-street, for the best shaving cream; diploma.

Parron & Coutaret, 62 Cannon-street, for a sample of albuminous soap; diploma.

John Y. Smith, corner of Thirty-sixth-street and Fifth-avenue, for samples of flesh and hair powder; diploma.

Geo. W. Busteed, 331 Third-avenue, for specimens of soap of good quality; diploma.

Piano Fortes.

Charles J. Holder, 137 Spring-street, for the best piano fortes, (silver medal having been before awarded;) diploma.

Reeks & Brennison, 197 Mercer-street, for the second best piano fortes; diploma.

Wm. H. Karr, 137 Spring-street, for excellent workmanship on piano forte cases; diploma.

Reeks & Brennison, 197 Mercer-street, for excellent workmanship on piano forte cases; diploma.

Pins.

John J. Howe, Howe Manufacturing Co., Birmingham, Derby, Conn., for the best specimen of solid head pins; gold medal.

Saddlery, Trunks, &c.

Horatio N. Peters, Newark, N. J. for the best trunk; diploma.

E. M. Thurston, 61 Fulton-street, for superior specimens of whips; diploma.

G. H. Ramppen, 46 Canal-street, for the best fireman's cap; diploma.

J. A. Horton, Jersey city, for specimens of carpet bags; diploma.

Raw and Manufactured Silk.

A. B. & W. H. Jones, Manchester, Conn. for the best specimen of sewing silk, (silver medal having been before awarded;) diploma.

Edmund Golding, Mansfield Centre, Conn. for the second best specimen of sewing silk; diploma.

J. Ryle, Paterson, N. J. for superior specimens of ball twist, sewing silk, &c.; silver medal.

Wm. B. Frink, Windham, Conn., for specimens of sewing silk; diploma.

John McRae, 109 Canal-street, for silk cords, gimps and binding, (silver medal having been before awarded;) diploma.

Peter Gruet, Orange, N. J. for specimens of bonnet wire; diploma.

Thos. Hale, Albany, for specimens of madder printing on India pongee; diploma.

Eleanor M. La Fetra, Shrewsbury, N. J. for a pair of silk stockings; diploma.

James Hanley, Twenty-second street, near Third-avenue, for superior harp strings, made from American silk; diploma.

Salmon Higgins, Ithaca, N. Y. for the best specimen of raw silk; gold medal.

Silver Plated Ware, &c.

Ball, Tompkins & Black, 181 Broadway, for the best specimen of silver ware, (gold medal having been before awarded;) diploma.

William Adams, 183 Church-street, for the second best specimen of silver ware, (silver medal having been before awarded;) diploma.

Albert Coles, 6 Green-street, for superior silver knives and forks, (silver medal having been before awarded;) diploma.

J. M. S. Smith, 146 Wooster-street, for superior specimens of plating on locks and door knobs, (silver medal having been before awarded;) diploma.

Stoves, Grates and Ranges.

Shepard & Co. 242 Water-street, for the best church and hall stoves, (gold medal having been before awarded;) diploma.

M. N. Stanley, 244 Water-street, for the second best church and hall stoves; diploma.

J. L. Mott, 264 Water-street, for a superior square cast iron stove, for offices, &c.; diploma.

Shepard & Co. 242 Water-street, for superior cylindrical reverberating stoves, for offices, &c.; diploma.

Jas. E. P. Dean, 210 Water-street, for the second best stoves, for offices, &c.; diploma.

Robert Atwater, 213 Water-street for the best specimen of parlor grates for burning anthracite coal; diploma.

Samuel Pierce, 111 Fulton-street, for the best cooking ranges, (gold medal having been before awarded;) diploma.

William Bebee, 646 Broadway, for the second best cooking ranges; diploma.

J. L. Mott, 264 Water-street, for the best cooking stoves, (an improvement;) silver medal.

Almond D. Fisk, 209 Water-street, for the second best cooking stoves; diploma.

Hubbell & Belcher, Sing-Sing, for a cooking stove; diploma.

Anson Atwood, Troy, N. Y. for a cooking stove; diploma.

Richard E. Peterson, 144 Bowery, for a cooking stove; diploma.

J. L. Mott, 264 Water-street, for a wood stove embracing many new principles; silver medal.

Philetus Phillips, Middletown Point, N. J. for a model of a wood stove; Diploma.

James Wood & Son, Philadelphia, for a specimen of American iron in imitation of Russia; silver medal.

J. H. Cunningham, 51 Wall-street, for a specimen of American lustre; diploma.

Stone, Cement, &c.

Samuel Goodwin, West Broadway, for artificial stone letter signs; diploma.

Surgical Instruments

A. G. Hull, 4 Vesey-street, for the best specimen of trusses and supporters, (gold medal having been before awarded;) diploma.

William Selpho, 17 Second-street, for the best Anglesy leg, (silver medal having before been awarded;) diploma.

John Allayola, 106 Bowery, for specimens of home bred leeches; silver medal.

Hicks & Miner, Middletown, Conn. for a vapour bath; silver medal.

Turning.

Samuel Harrison, 145 Sixteenth-street, for a beautiful specimen of fancy turning, and good specimens of tassel moulds; diploma.

Wigs.

Frederick Gibbins, 27 Maiden-lane, for the best wig for its shape; diploma.

Joseph Cristadora, 6 Astor House, for specimens of wigs; diploma.

Window Glass.

Redford Crown Glass Co., Redford, N. Y., Charles Goff, agent, 164 Maiden-lane, for the best specimen of window glass; (silver medal having been before awarded;) diploma.

A. R. & S. H. Fox, Rensselaer county, N. Y., for specimens of cylinder glass, (much improved;) diploma.

Woollen Goods.

Middlesex Manufacturing Company, Lowell, Mass., Lambert & Wolcott, agents, 63 Pine-street, for the best specimens of black cloths and black cassimeres; gold medal.

Wethered Brothers, Baltimore, Md., William C. Langley & Co., agents, 64 Pine-street, for the best specimens of fancy cassimeres; silver medal.

Middlesex Manufacturing Company, Lowell, Mass., Lambert & Wolcott, agents, 63 Pine-street, for the second best specimens of fancy cassimeres; diploma.

Union Company, Norwalk, Conn., D. Brigham, agent, 60 Pine-street, for the best specimen of indigo felt beavers; (gold medal having been before awarded;) diploma.

Dorastus Kellogg, Skaneatelas, Onondaga county, N. Y., D. Brigham, agent, 60 Pine-street, for the second best black felt beavers; diploma.

Ballard Vale Company, Andover, Mass., W. C. Langley & Co., agents, 60 Pine-street, for the best specimen of white flannels; gold medal.

Miscellaneous.

B. D. Sage. Middletown, Conn., for superior pressed bricks; diploma.

Eli Kirk, 300 Broadway, specimens of articles made from anthracite coal; diploma.

H. Essex, Samsondale, N. Y., for specimens of needles; diploma.

Pierpont & Hotchkiss, New-Haven, Conn., for beautiful specimens of mineral knobs; silver medal.

John R. Chapin, 400 Greenwich-street, for a topographical map of the State of New-York; diploma.

Henry Burden, Troy, N. Y., for specimens of horse shoes; diploma.

Peter Cooper, New-York, for specimens of the first quality brazier's and horse nail rods, made throughout with anthracite coal; gold medal.

Charles W. Curtis, New-Haven, Conn., for metallic elastic sacking for bedsteads; diploma.

Thos. B. A. Weiserr 43 Centre-street, for glass picture frames;

John Mitchell, 26 Vandam-street, for superior fishing rods; diploma.

Reimer & Tice, 13 Nassau-street, for block letter signs; diploma.

Armistead Fielden, 244 Spring-street, for specimens of weaver's reeds and heddles; diploma.

Alex'r Jones, 192 Broadway, for respirators; diploma.

Stevens & Coyle, 15 Dover-street, for curled maple Venetian blinds; diploma.

Samuel Dewick, 36 Goerck-street, for specimens of Venetian blinds; diploma.

Wm. Mullane, 82½ Nassau-street, for fine flavored portable meats and soups; diploma.

James Van Dyck, Brooklyn, for superior specimens of mustard; diploma.

Charles L. Stickney, corner of Rivington and Attorney-streets, for superior specimens of mustard; diploma.

Wm. Webb, Wilmington, Del., for very superior corn stalk sugar; diploma.

Caleb Benedict, Walton, Delaware county, N. Y., for the best maple sugar; diploma.

Southwick & Prior, 64 Pearl-street, for superior pepper sauce; diploma.

Henry R. Shankland, 192 West Broadway, for superior pickles; diploma.

James West & Co., 122 Fulton-street, for superior pickled oysters; diploma.

J. M. Cockcroft, for superior lard oil; diploma.

W. Latting, 61 Downing-street, for cane umbrellas; diploma.

Metropolitan Bread Company, John Ashwell, agent, 118 Mulberry and 41 Vesey-streets, for superior specimens of bread; diploma.

STATEMENT

Designating the number of Premiums, and the value thereof, awarded by the American Institute of the city of New-York, at the Annual Fairs from 1835 *to* 1842, *inclusive.*

YEAR.	Gold Medals.	Silver Cups.	Silver Medals.	Diplomas.	Vols. of Books.	Value
1835, ...	16	..	91	340	..	$905 40
1836, ...	27	..	125	249	..	1,138 00
1837, ...	29	..	126	308	..	1,198 30
1838, ...	26	..	167	396	..	1,370 04
1839, ...	27	13	124	384	..	1,155 44
1840, ...	12	18	60	331	..	842 50
1841, ...	17	19	118	336	26	1,183 03
1842, ...	12	26	88	439	82	1,155 96
Total,.....	166	76	899	2,783	108	$8.948 67

STATEMENT

Showing the number of Premiums awarded to the Agricultural Department.

YEAR.	Gold Medals.	Silver Cups.	Silver Medals.	Diplomas.	Vols. of Books.
1835, ...	1	..	4	17	..
1836, ...	3	..	9	28	..
1837, ...	2	..	15	39	..
1838, ...	4	..	21	42	..
1839, ...	6	13	17	70	..
1840, ...	2	18	12	60	..
1841, ...	6	17	31	71	26
1842, ...	3	25	34	37	82

(G.)

REPORT OF THE MANAGERS OF THE FIFTEENTH ANNUAL FAIR, 1842.

The Managers of the Fifteenth Annual Fair of the American Institute, having performed the duties assigned to them, beg leave to present a report of their proceedings, and the results of their labors.

Their first meeting was held on the 23d of May, 1842, when they organized by appointing John Campbell, chairman, and Samuel S. Bowman, secretary. They then constituted the usual sub-committees to take charge of the various departments.

The following accounts give a true statement of the receipts and expenditures, as reported by said committees: which reports, together with all the vouchers are herewith presented.

Receipts.

Amount received from sales of tickets at the Fifteenth Annual Fair,....................................	$6,196 75
Amount received at Cattle ground....................	172 00
“ at Castle Garden, being half the proceeds taken at the nautical exhibition,	373 00
	$6,741 75

Expenditures.

For detailed account, see statement H.

The Premium committee have received sixty-four written reports from the judges in the various branches submitted to them, exclusive of the reports on the agricultural portion of the exhibition.

The number of premiums awarded, amount to 641, and consisted of the following:

11	Gold Medals.
27	Silver Cups.
86	Silver Medals.
439	Diplomas.
5	Vols. Kenrick's American Orchardist.
11	“ Brideman's Gardener's Assistant.
5	“ United States Farmer.
6	“ Cultivator.
4	“ New Genesee Farmer.
5	“ Gray's Political Agriculture.

4	Vols.	Johnson's Agricultural Chemistry.
4	"	Manning's Work on Fruits.
5	"	American Agriculturist.
5	"	Buel's Farmer's Companion.
5	"	Downing's Rural Architecture.
2	"	Downing's Cottage Architecture.
2	"	Hovey's Horticultural Magazine.
2	"	American Flower Garden Directory.
14	"	Bridgeman's Florist's Guide, and
3	"	Dana's Muck Manual.

All these books were of course distributed to the successful competitors in the agricultural department, also one of the gold medals, and all the twenty-seven silver cups, thirty-four of the silver medals, and thirty-seven of the diplomas.

Apprehending a decrease in the visitors, and consequently in the receipts, owing to the state of the times, connected with the fact, that these Fairs are no longer a novelty; the managers commenced their operations with a full sense of the necessity of exercising all possible economy, and in every arrangement this point was kept in view. The expenses nevertheless somewhat exceeded their expectations, but upon scrutinizing all the accounts, taking into consideration at the same time, the numberless alterations which it is always indispensable to make in Niblo's Saloon—the advantages so generally taken of the necessities of the occasion—bearing in mind also the responsibility, and obligation to preserve and protect the property of the exhibitors, and consequent number of men requisite for that purpose, the expense of the Fifteenth Fair, may be stated as the least at which such an exhibition can be carried through with credit to the Institute. In proof of this, we have only to look at the receipts and expenditures a few years back.

Comparative statement of the receipts and expenditures of the Annual Fairs of the American Institute, from 1835 to 1842, inclusive.

	Receipts.	*Expenditures.*	*Excess.*
1835, ...	$5,156 70	$3,005 14	$2,150
1836, ...	6,228 50	4,504 81	1,784
1837, ...	7,152 45	5,670 09	1,482
1838, ...	9,360 25	7,920 05	1,710
1839, ...	8,831 41	7,602 12	729
1840, ...	6,581 25	4,091 75	1,490
1841, ...	7,050 00	5,454 26	1,596
1842, ...	6,741 75	5,825 75	916

It is here seen that, with the exception of 1839, this fair has been the least profitable, in a financial point of view, of any since 1835. The expenses appear to be $371 more than the last. A few words of explanation, however, will show that if the expenses had been curtailed, the receipts would have been reduced in a much greater ratio. For instance, if the nautical exhibition and the fire works, (which will be more particularly noticed hereafter,) had been excluded, the expenses would have been diminished $400; which would have brought the amount $100 below that of last year. But the receipts would at the same time been cut off to the extent of six or seven hundred dollars. So that, comparing the accounts, without reference to the exhibitions, with those of the five preceding years, the expenses are, in reality, least of any. But it is in vain to disguise the fact, that the receipts, when subjected to the same comparison, have very materially diminished. This is a subject of vital importance, and must not be lost sight of in our future operations.

It is known to all of us, that a few years ago the Institute was in debt to the extent of $1,500. This has been paid off, and we are now, happily, free from embarrassment; but it required the addition of all the profits of the fairs to the current receipts of the repository to accomplish it. It is estimated that the nine hundred and six dollars now added to the general fund, will not be more than sufficient to meet the current expenses of the year. Hence it follows, that in our present condition, one unprofitable fair will throw us again in arrears. Indeed, we may, at this moment, consider ourselves indebted to the unusual and extraordinary continuance of clear and pleasant weather, which lasted during the whole exhibition, for the favorable result which is now presented. Let it never be forgotten that the success of institutions, like that of individuals, depends upon the relative condition of their income and outlay. Neither the one or the other can long flourish, if the latter exceeds the former. Punctuality and promptness in the discharge of pecuniary obligations, are alike vital to both. Nothing can be more true than the adage, that when credit goes out at one door, prosperity goes out at the other. And it may be predicted with confidence that whenever the monetary affairs of the American Institute again become embarrassed, the seeds of its dissolution will have been sown.

It affords the Managers much satisfaction to state that the reputation of the Institute has been fully sustained by the late exhibition. Every branch of domestic industry has exhibited increased improvement, and the growing importance of the association is exemplified in the anxiety which is manifested by producers and inventors, to obtain the approbation and awards of our judges.

In the agricultural department, the display of live stock, although not as large as on some former occasions, was deemed better in other respects. The arrangements were made with an especial view to accommodate and attract exhibitors. It had been customary for the two previous years to place the cattle show in charge of Mr. G. W. Miller, who provided sheds, stalls, &c., making a claim upon every owner for entrance money, with charges for attendants, and commissions upon all sales, whether made by auction or otherwise. These charges were loudly complained of, and the managers thought with good reason. They therefore relieved the exhibitors of all such payments, by providing, at the expense of the Institute, suitable accommodations, and stipulating that the provender should be furnished at the lowest market rates. This was considered not only as advancing the interests of the Institute, but there is evidently an obligation to afford every facility to agriculturists, in order to induce them to bring forward the best specimens of their stock, inasmuch as the State has generously awarded us the sum of $950 annually for the promotion of this important object.

The plowing exhibition, although highly creditable, did not attract the attention which it merited. This was owing to the fact, that the ground selected was too retired and out of the way, it being upon Long-Island, about five miles from Brooklyn. Few persons, comparatively speaking, were willing to give the time necessarily required to go so far. On a former occasion, when the plowing exhibition was held near the populous town of Newark, in New-Jersey, it was estimated that four thousand persons assembled to witness it, among whom were the Governor of the State, common council of Newark, and many of the most distinguished gentlemen of the county. The Managers would recommend, that in future, the ground selected for this exhibition be near this city, in some adjoining populous town.

The horticultural department deserves the especial attention and encouragement of the Institute. At the two last fairs the room appropriated to this exhibition, was constantly crowded and attracted as much, if not more attention, than any other. The display of fruits, flowers, vegetables, and other garden products, as well as those of the field and the dairy, were justly admired and praised by all the visitors. It may be well to state, that a quantity of seeds have been presented to the Institute, for distribution among the members, upon condition that they will exhibit some of the products at the next fair.

When it was suggested to attempt an exhibition of Colt's sub-marine battery, an application was made to the Secretary of the Navy, in the hope, that as an appropriation had been made by Congress, for such experiments, he would have furnished a vessel for the purpose, or at least have afforded some aid in procuring one, but the request was denied. It was then thought, that the experiment might still be made without expense to the Institute, by connecting with the blowing up of a vessel, a trial of Francis' life boat, and other life preserving contrivances, Morses' magnetic telegraph, boat races, &c.; the whole to form a grand aquatic gala. As such a display could not fail to excite public attention, and as the cost was estimated not to exceed $300, an arrangement was made with the proprietors of Castle Garden, who entered into a contract to give us the use of the garden for that day, and one-half of the receipts for admission. The success of the undertaking, the gratification it afforded the many thousands of spectators, and the very flattering notices which were taken of it, as connected with the Institute by the public press, are too well known to require comment. The Managers have great pleasure in stating, that they have not been disappointed in the pecuniary result.

The cost of the whole exhibition as stated in the preceding accounts, was	$277 07
And the receipts for admission into the garden,	373 00
Which shows a balance in favor of the Institute of,	$95 93

It is proper, however, to deduct from this, the extra advertising, and the cost of the additional premiums, which were awarded to the competitors on the occasion, and which items are included in the bills presented under their respective heads.

The extra advertising was,	$15 75	
And the cost of the premiums,	34 00	
		49 75
These deducted will leave a clear gain of		$46 18

It is scarcely necessary to add, for it is conceded by every one, that the scene was never equalled, in magnificence, splendor, and success, by any exhibition within the waters of the United States.

There is a subject of great moment, which it may be proper to advert to at this time. It relates to the place for holding our future fairs. The lease which Mr. Niblo holds of the ground he now occupies, will expire next year, and it is understood to be the intention of the owners to sell the same for permanent improvement. When this event occurs, we shall of course be deprived of that place. Where similar or suitable accommodations can be procured has already been a matter of earnest inquiry, for when Mr. Niblo advanced his terms to the present high rate of $75 per day, the Managers endeavored to find some other spot, but were unable to do so, and as a matter of necessity, were constrained to accede to Mr. Niblo's terms, the location being decidedly preferable to any other in the city. But when the change above alluded to takes place, there will be no alternative but to abandon the Fairs, or to procure another location for holding them.

There has already been some speculations as to the possibility of the Institute's owning or possessing in its own right, a piece of ground, with buildings adapted to all their wants, and thereby greatly extending the sphere of its usefulness.

The Managers are aware that the present is a most unpropitious time to suggest any project involving the expenditure of money; neither have they matured any plan to offer for your consideration; still, with the above named alternative staring them in the face, the necessity of speedy action is so apparent, that they feel it to be their duty to present it in an especial manner to your notice at this time. It is easy to build castles in the air, and to imagine what might be accomplished, if public liberality kept pace with our wishes and the growing importance of our institution.

Nothing is wanting but sufficient ground with suitable apartments, to make this Institute the great National Repository of American art and industry, and raise it to an eminence surpassing any similar establishment in the United States, and rivalling, in time, any in the world. It would soon present a collection of every improvement in machinery and manufactures; of all the implements of agriculture; of every article in domestic economy, and every patent for the advancement of the arts and sciences. Here would be deposited copies or models of all the inventions for facilitating and expediting the labors of the farmer, embracing plows in all their variety, with every machine adapted to modern horse-hoeing and horse-planting husbandry. Should he ask where he must go to see and examine these inventions, instead of being told that he must necessarily traverse every section of the city, and spend hours in listening to perplexing dissertations upon the merits of this, and the demerits of that, he would be directed to the American Institute. You will see at a glance every implement, from the dung-fork, to aid you in fertilizing your ground, to the threshing and smut machines, to prepare your grain for the flouring mill. There you will find a display of the ingenuity and talent of the land, adapted to every branch of your vocations, and to every section of the country. These you may examine at your leisure, and select with judgment. Inventive talent would here see, in convenient arrangement, all the complications of machinery connected with the mechanic arts, and be enabled to compare and decide upon their capabilities, as well as the modifications and improvements of which they were susceptible, in order to accomplish any desired result.

Strangers visiting the city, and wishing to purchase any of the various articles of domestic manufacture, would resort to this place for information, which could be obtained no where else so easily or satisfactorily. There they would find in every variety, all articles they might be in quest of; could make their selections from observation and comparison, having the benefit of access to the reports of the best qualified judges, as to their respective merits, to aid them in their decisions; and having decided, would be directed at once to the manufacturer or his agent.

Duplicates of every useful invention now in the patent office, would soon be placed here, the inducement being a certainty that they would be seen by a far greater number of persons, than could have access to them in Washington; and if connected with machinery, the proprietors would have the additional advantage of being enabled to exhibit them in operation at any moment, by means of a permanent steam power upon the premises.

Here also should be suitable accommodations for holding our annual Fairs, in a style commensurate with the magnitude of the enterprise. The commodious and well arranged libraries and reading rooms, would attract the attention of all persons in search of information on subjects connected with domestic or foreign improvements, and the whole, in due time, stand upon a lead with the most celebrated similar institutions in Europe. To arrive at this distinction, we must aim at it, and never indulge the idea that it is unattainable. If additional stimulus be needed, we have but to reflect for a moment upon the objects around us, which, because they are familiar, fail to impress us with a just idea of their importance. Compare our population now with what it was thirty years ago; look at our steamboats, canals and rail-roads; and last, though not least, our noble aqueduct, which, whatever may be said of it when compared with the ruins of other ancient works, stands unrivalled in the world at the present day; and all these the offspring of a few years.

The Managers, however, are not visionary enough to believe that such an establishment is likely to be seen here very soon; but they would ask whether it is in reality more visionary to suppose that such a fabric might be raised upon the foundation, presented by the American Institute as it now exists, than it would have been fifteen years ago, to suppose that the American Institute, from nothing, would in so short time, have attained the position which it now enjoys. We are not ourselves aware of our own standing. Like "a prophet who hath no honor in his own country, we are more respected and valued abroad than at home." At any rate, something must soon be done for our future accommodation, for even the tenure upon which we hold this room, is an exceedingly precarious one, and to accomplish any thing, the individual and combined effort of every member and friend must be brought into requisition.

JOHN CAMPBELL, *Ch'n.*

S. S. Bowman, *Sec'y.*
New-York, Jan. 12, 1843.

(H.)

EXPENDITURES

On account of the Fifteenth Annual Fair of the American Institute, October, 1842.

Printing and Publication Committee.

Printing circulars, blanks, invitations, handbills, &c.,	$272 66	
Newspaper advertisements,	235 13	
Printing list of premiums,	38 00	
Printing Address of Hon. H. G. O. Colby,	31 75	
Books, stationery, flags, bill posting, &c.,	136 93	
		$714 4

Committee on Steam Power.

Steam engine, &c. for putting in operation agricultural and mechanical machines,	$382 00	
Incidental expenses of do.	22 01	
Fixtures for Dynamometer,	13 00	
Repairs on boiler,	7 00	
		424 51

Committee of Arrangements.

Carpenter's work,	$74 81	
Laborer's,	163 50	
Lumber and ironmongery,	95 10	
Police and night watch,	174 50	
Clerks and assistants,	226 50	
Glazing show cases,	40 05	
Coal, muslin for tables, cartage, &c.	60 55	
Gas light, oil and candles,	197 51	
Water commissioners and plumbing,	22 53	
Incidental expenses,	267 08	
		1,322 13

Finance Committee.

Door keepers and ticket sellers,		110 50
Carried forward,		$2,571 61

Brought forward,		$2,571 61
Committee on room and music for Anniversary Address.		
Rent of Broadway Tabernacle,	$75 00	
Leader of the N. Y. Sacred Music,	25 00	
Use of organ, &c.	18 00	
		118 00
Agricultural Committee.		
Erecting sheds, stalls, &c.,	$210 59	
Auctioneer, clerk and laborers,	65 75	
Oxen for plowing, music, &c.,	34 62	
Expenses incidental,	21 00	
Carpenters' work, labor, &c. in horticultural room,	153 96	
		485 92
Nautical Committee.		
Gunpowder, tank, &c.,	144 20	
Electro magnetic telegraph, flags, boat hire, &c.,	132 87	
		277 07
Miscellaneous Bills.		
Rent of garden, saloon and premises,		1,050 00
Fireworks,		95 06
Banner for Croton celebration,		32 00
Expenses of orator,		40 13
Premium Committee.		
Silver cups,	220 00	
Gold and silver for medals,	441 29	
Striking up medals,	54 00	
Engraving cups and medals,	81 50	
Medal cases and seals,	22 67	
Diploma plate and 450 diplomas,	120 00	
Filling up diplomas,	110 50	
Agricultural works and binding for premiums,	104 00	
		1,155 96
Total,		$5,825 75

Expenditures of the Repository of the American Institute, from March 31, 1842, *to March* 31, 1843.

Salary of Superintending Agent,	$1,229 00
do Clerk and Messenger,	650 00
do Recording Secretary,	74 00
Printing circulars, blanks, &c.,	22 00
Newspaper Advertisements,	20 32
Stationery,	13 25
Books for library and binding,	52 38
Fuel and light,	48 65
Rent of premises for repository,	600 00
U. S. Agricultural Society, as auxiliary,	10 00
Repairs of stoves, &c.,	24 65
Newspaper files for reading room,	4 00
Cleaning,	22 50
Petty expenses, postage, &c.,	128 37
Total,	$2,899 12

(I.)

For Address of Hon. H. G. O. Colby, of Massachusetts, see Documents on file with the Clerk of the Senate.

STATE OF NEW-YORK.

No. 124.

April 22, 1844.

THIRD ANNUAL REPORT

Of the American Institute, on the subject of Agriculture.

TO THE LEGISLATURE OF THE STATE OF NEW-YORK.

The flattering reception and approbation of two Annual Reports, for 1841 and 1842, which were ordered to be printed and numbered among the important documents of the State, with additional extra copies for more extensive distribution, have induced the Trustees, although not specially required, to prepare another report for 1843.

The American Institute having been entrusted with a portion of the funds of the State, to be applied in carrying out the design of its charter in the encouragement of agriculture, commerce, manufactures and the arts, not only in this State, but in the other States of the Union—its conductors are solicitous to show that the trust has been fully and faithfully performed.

This report mainly relates to agriculture, the first named and primary object of the charter, to which however, the other specified objects have been found uniformly directly or indirectly auxiliary. The fabrics of the manufacturer and artisan are mostly made from the raw materials produced by agriculture, and from the same source is derived the sustenance of both. Thus a certain demand is created for the raw products of the farm and garden, in proportion to the increased employment of the manufacturer and artisan, and commerce likewise finds employ in apportioning these raw products, and also fabrications made from them suited to the demands of the consumers. The increasing fabrications of the manufacturer and artisan necessarily create a proportionate demand for the productions of the agriculturist, and stimulate him to increase them, and the augmented commodities of the whole increase the business of commerce by supplying the materials for exchange and distribution in exact proportion as they are augmented. The encouragement given to manufactures and the arts are therefore decidedly subservient to agriculture. In this view the whole expenditures of the Institute may be said to be directly or indirectly for the benefit of agriculture.

The appropriation to this Institute under the law of the State, is $950 per annum, on condition an equal sum is raised and applied to the encouragement of agriculture, &c. The accounts in the appended papers show that within the last year there has been expended $10,070.46—more than ten times the amount required by the act making the appropriation; every dollar of which, excepting the State bounty, were the voluntary contributions of our fellow-citizens.

These facts are referred to as evidence of the strength of the hold of this Institute on public confidence, and the favor in which its operations are held in the estimation of the public, and above all with the hope that they will command your approbation; as those who have labored to sustain this Institute feel it is deserved. The favor and confidence thus manifested towards this Institute are deemed most interesting indications of the state of public feeling towards improvement, and particularly in agriculture, which seems to have received a new and powerful impulse within the last few years, from associations formed and forming, and from the multiplication of agricultural publications, and particularly periodicals. The old modes of farming handed down from father to son, (many till lately incredulous,) now begin to believe are insufficient to cope with modern science, skill and competition.

The reports of committees and judges, &c., with other papers hereto annexed, will give a partial view of the agency of this Institute, and the means employed to give additional impetus to the advancing improvements of the age, and enable our country to avail itself of their earliest benefits.

The position of this Institute is most propitious for the purpose; located in our great commercial emporium, in the midst of more than three hundred thousand inhabitants, and estimated to have within her limits twenty thousand strangers continually in constant communication by means of oceans, seas, rivers, canals and railroads, with all parts of the world; its opportunities and facilities for receiving and diffusing knowledge, and accomplishing the benevolent objects of its charter, is, and must remain through a long period, unsurpassed. Under these influences its transactions have been multiplied, diversified and extended, far beyond the anticipations of the most sanguine of its early friends; so that a brief summary of its doings even for a single year, would in all probability be too voluminous for a legislative document. Accordingly only a small number, probably not one in fifty of the most practical papers, have, from among a mass of records, been copied and placed together under distinct general heads, which will be submitted with a few comments.

There will be found under the general head of REPORTS OF COMMITTEES OF JUDGES, marked B., separate and distinct reports from committees on

Horses, jacks and mules;
Sheep;
Horticulture;
Vegetables;
Pears;
Dr. R. T. Underhill's vineyard at Croton Point, N. Y.;
H. Steele's early Isabella grape vines, at Jersey City, N. J.;
Ploughing exhibition, at Paterson, N. J.;
Agricultural implements;
India rubber goods;
Mrs. B. R. Voorhees' household manufactures;
The great wrought iron gun for U. S. steamer Princeton;
Hamilton's mill for sawing curved timber;
Campbell's self-feeding apparatus for steam-boilers, and
Andrews' elevating water-wheel.

A correct List of Premium Articles of the 16th Annual Fair, will be found marked C., and the premiums awarded to each are noted. As they were selected by competent judges from about 20,000 articles, contributed by the various departments of industry, art and invention, from not less that sixteen States, it cannot fail to afford a useful directory to purchasers generally.

Communications from Contributors, marked D. From Robert L. Pell, whose farm is situated in Ulster county, N. Y., and has on it 20,000 Newtown pippin apple trees; his successful treatment of the same. Also peach, plum, cherry, apricot, nectarine, gooseberry, currant, raspberry, strawberry and grape. The observations and experiments minutely detailed by Mr. Pell, are invaluable. He has also appended a list of the names of the different varieties of fruit grown on his farm. Of apples, 31 varieties; pears, 40; peaches, 50; plums, 31; cherries, 20; apricots, 9; nectarines, 6; grapes, 18; gooseberries, 5; raspberries, 6; currants, 6; filberts, 2; strawberries, 8.

From Samuel Walker, a distinguished horticulturist of Massachusetts, on the raising of pears as an article of commerce, with other observations and experiments.

From Henry Meigs, on the red marl, so called, found at Nyack, Rockland county, N. Y., with details of experiments on the farm of Hugh Maxwell, Esq., showing its highly fertilizing qualities. It abounds in almost unlimited quantities on the banks of the Hudson river.

From Joseph Carter, on the management of milch cows. From G. Morris, the milking qualities of American cows, management, &c.

From Lambert Wyckoff, on the management, cost and proceeds of one acre of cabbages, grown on Long Island.

From R. L. Pell, on the cultivation of vegetables; observations and experiments on rye, sugar-beets, egg-plants, sweet potatoes and culinary vegetables.

From Francis Price, detailing an economical mode of cultivating vines for pumpkins, squashes, &c., with details of experiments, the effect of training in a southerly direction, &c.

From Joseph Clowes, on the cultivation of beets and parsnips.

From O. Mauvan, on his horse "Charles," 41 years old.

From Jerome Johnson, on the process of making butter, practiced by him, for which the medal of the Institute was bestowed.

From John A. Smith, process of making butter, which obtained a diploma.

From William H. Davenport, on the method of making pine-apple cheese.

From P. Hawley, describing his mode of making the cheese which obtained a silver medal.

From Edwin Smith, method practiced by him for preserving cheese.

Report of Meetings of the Farmer's Club is marked E. This association, formed the last year, under the auspices of this Institute, held their first meeting June 22, 1843. The time for the regular meeting is the 1st and 3d Tuesday of every month, at 12 o'clock, M., at the Repository of the Institute. It is composed of all such friends of agriculture as are desirous of giving or receiving information, results of experiments, &c., in agriculture. The meetings have been well attended by farmers and gardeners, often from a distance, and they are found exceedingly interesting and instructive. Correspondences have been invited and accepted from several foreign and domestic clubs. By gathering experiments in this way, made over a great extent of country, knowledge of the most practical and useful kind is concentrated, and then diffused. It is believed their formation would be useful. The fundamental rules for the government of the club, subjoined, are simple and short. The report of the proceedings of two meetings, are inserted among the documents merely as specimens of the doings of the club. A report of all the meetings would of themselves make a volume. Also several communications made at other meetings of the club by experienced culturists, viz: on the cultivation of fruit, by B. G. Bozwell; and also, on seedling fruit trees, poudrette as a fertilizer, compared with other manures, by D. K. Minor; effects of poudrette on Indian corn, by Anthony Dey; and on pruning, by D. Jay Browne.

FUNDAMENTAL RULES FOR THE GOVERNMENT OF THE NEW-YORK FARMERS' CLUB.

New-York Farmers' Club, established to encourage agriculture and horticulture. Printing and publications to be made under the direction and at the expense of the American Institute. Rooms, fires and lights also to be supplied by the same. All other expenses to be submitted to the Institute before any liability can be incurred. The president and secretary of the board of agriculture, shall be president and secretary of the club. In case either is absent, the club may elect in place of absentee either or both.

The meetings shall be open at all times to farmers and gardeners and their friends, *free from all expense.* The objects of the meetings are proposed to be carried into effect by reading of papers on agriculture and horticulture, conversation, discussion and exhibition of agricultural and horticultural productions, machines, implements, &c.

The rules of order shall conform to general usage in similar meetings. A subject for particular consideration shall be named and published in advance of future meetings. Written communications, embracing experiments and facts, will be received from gentlemen who cannot conveniently be present, which the Secretary will read. At the next meeting, each attendant shall be requested to name suitable subjects for the consideration of future meetings, from which six subjects shall be selected for the six ensuing meetings. Hereafter, every three months, three new subjects shall be selected as aforesaid, for succeeding meetings. In future, the stated meetings shall be the first and third Tuesday in each month in the year.

Adopted December 12th, 1843.

Conversation Meetings, marked F., have also been established. The first was held November 22d, 1843. The subjects intended to be discussed at these meetings, relate to manufactures and the arts. Meetings are held every Wednesday evening, at the Repository of the Institute. The whole proceedings, though very interesting, are too voluminous to be embraced in our annual report. The rules and regulations below, exhibit the plan on which the meetings are conducted, and the report of the meetings where iron, steel and wood were considered, will give some idea of their practical operation in eliciting information.

RULES FOR THE CONVERSATIONAL MEETINGS AT THE AMERICAN INSTITUTE ON WEDNESDAY EVENING OF EACH WEEK.

1. That a chairman, two vice-chairmen, and two secretaries, be appointed by the members attending the third conversational meeting.

2. That it shall be the duty of the chairman, and in his absence, of one of the vice-chairmen, to preside at all conversational meetings held during the winter, and that the secretaries keep minutes of all the important facts stated at these meetings, in a book to be provided for the purpose; which book shall be the property of the Institute, and open to the perusal of all the members.

3. That no person shall be at liberty to speak more than 15 minutes at one time, without permission from the meeting.

4. That in no case will a member be permitted to reply to remarks made by another member; it being understood that at these meetings members are only expected to state such facts connected with the subject of conversation, as their experience or knowledge may suggest, but not to encourage debate.

5. That a list of subjects for conversation be posted in the room, to which each member may add such as he may be anxious to avail himself of the information of members upon; it being understood that these meetings are intended to disseminate any information possessed by one member to the whole meeting.

6. That previous to the close of each meeting, the chairman shall propose three subjects, (if so many remain undisposed of on the list,) one of which shall be selected for the next evening's conversation.

7. That the members shall be invited to attend at 7 o'clock, and employ their time until 8 o'clock in social intercourse, thus enabling them to become acquainted.

8. The chairman shall call the meeting to order at 8 o'clock, and in all cases adjourn at half past 9 o'clock, if not previously adjourned.

9. All questions of order shall be decided by the presiding officer.

10. Members may invite their friends to attend these meetings.

JAS. J. MAPES,
T. B. STILLMAN,
JAS. R. CHILTON,

Committee for the organization of the Conversational Meetings.

The Report of the Managers of the 16th Annual Fair, marked G., presents a most gratifying account of that anniversary; about 240,000 visitors attended. The number of articles exhibited was 20,000; twenty times the number brought to the first fair in 1828. During the continuance of the 16th fair thirteen addresses were delivered by men eminent in their various professions. The report states that 674 premiums were awarded, consisting of gold and silver medals, silver cups and diplomas. Who cannot perceive the mighty influence which the competition of 16 years must have effected? And who can calculate the amount in the vast system of our country's improvements which the measures of this Institute have accomplished? And to this day it is without a local habitation, dependent on the caprice and avarice of landlords whose exactions continually limit the means which a generous public contribute to reward industry and skill. An appropriation by our Legislature more deserved or more beneficial, that would enable the Institute to erect ample edifices for all their operations, could not be made. It would repay an hundred fold, and give permanency to an institution which now presents the best working model that the country affords. We commend the consideration of this subject to our considerate legislators, in the full belief that a liberal enactment for this purpose will ere long be made, which will be sure to receive the unanimous approbation of the public.

The agricultural address by J. E. Teschemacker, a well known agriculturist of Massachusetts, is marked H., and has been selected from among thirteen others for its practical good sense, and more particularly for the accurate experiments made with Guano, a manure that has attracted so much attention in England on account of its almost incredible fertilizing properties. An artificial guano has been made from similar ingredients as disclosed by careful analysis, which it is hoped may be equally fertilizing, and much more economical. It will be effectually tested the coming season.

The proceedings of the National Convention of Silk growers and manufacturers marked I., is one of the most valuable reports that ever emanated from the Institute. It is the first attempt that has ever come to our knowledge, to concentrate the facts and experiments of the silk culturists of the whole country, and it has in this instance been accomplished with signal success. The statements of more than one hundred and fifty practical silk culturists and manufacturers are recorded in this report, whether successful or not. And the question is settled that the silk culture, under proper management, may be advantageously pursued throughout a greater part of the United States, and it is believed that the folly would not be greater to import foreign grain for our consumption than to import silk. Care, watchfulness and skill are essential to success. For the want of it the silk of some countries is uniformly sold fifty per cent lower than that of other countries; and the difference is probably not less in the quantity produced, where skill in the hatching, feeding, or good management of this delicate insect is wanting. The universal testimony is favorable to our climate for the production of silk. Failures in the undertaking are minutely related so that the causes can be understood, and the successful means employed are also detailed. The substance of all the knowledge which the experience of one hundred and fifty practical culturists have acquired by years of experience, are embodied in this short report. It is a guide of inestimable value, and should be studied by all interested in the silk culture.

Catalogue and pedigrees of Improved Cattle, exhibited at the 16th Fair, is marked J. The main object of the Institute in the show of stock, has been to collect a few of the very best of high blood, with striking points, from the most noted herds in our country, and not to crowd the ground with ordinary animals. This was accomplished at the last Fair, to the acceptation of the best judges which our country affords. The celebrity of the names of the breeders alone, would be an ample guarantee for this, and the reports on stock will be a safe directory to all those who aim to propagate the most improved breeds.

The account of sales, marked K., of American flour, beef, India pork, prime mess pork, good American butter, grease butter, lard, cheese and tallow, effected in London, in 1843, with freight, &c., is affixed to show the farmer what he has to expect from the great market of Europe, and also for his consideration, whether it is not his interest to look to and encourage the home market as most reliable for fair and steady prices.

The receipts and expenditures have been as follows:

Receipts.

To cash received from sales of tickets at the 16th Annual Fair, 1843, ...	$8,276 25
" received at the cattle exhibition,..........	320 87
" lumber sold at the close of the Fair,.......	71 78
" rents of confectionary stands,............	139 90
" contributed by members,................	1,224 00
" Comptroller of the State of New-York, under act of May 5, 1841,...................	950 00
" lectures with planetarium, at Niblo's Garden,	194 64
" Wm. Niblo, donation, ...	50 00
" Livingston Livingston, for library,........	25 00
" Amount on hand at the date of the last report, April 5, 1843, ...	161 03
Total, ...	$11,413 47

Expenditures.

(For a detailed account, see statement L.)

By disbursements, 16th Annual Fair,....	$6,153 08	
" Repository and Library,	3,917 38	
		$10,070 46
Balance on hand, ...		$1,343 01

A large portion of which has been appropriated for the purchase of books, relating to modern discoveries and improvements in agriculture and the arts.

By order,

SHEPHERD KNAPP, *Acting President.*
Z. B. WAKEMAN, *Superintending Agent.*

New-York, April 4, 1844.

DOCUMENTS

Accompanying the Third Annual Report of the American Institute, April 4, 1844.

DOCUMENTS

Accompanying the Third Annual Report of the Trustees of the American Institute, of the city of New-York.

A. Trustees, Managers of the Sixteenth Annual Fair, and Board of Agriculture.

B. *Reports of Committees.*—Report of Judges on Horses, Sheep, Horticulture, Vegetables, Pears, Underhill's Vineyard, Steele's Grapes, Ploughing Exhibition, Agricultural Implements, India Rubber Goods, Mrs. Voorhees' Household Manufactures, Wrought Iron Gun, Hamilton's Saw-Mill, Campbell's Self-feeding Apparatus, Andrews' Elevating Water-wheel.

C. List of Premiums awarded at the Sixteenth Fair.

D. *Communications from Contributors.*—R. L. Pell's Fruit Farm, Walker's Pears, Maxwell's Farm, Carter on the Care of Cows, Milking qualities of American Cows, management, feeding, &c., by Gouverneur Morris, Wyckoff's Cabbage crop, Pell's mode of raising Rye, Sugar Beets, Egg Plants, Sweet Potatoes and Culinary Vegetables, Effects of Poudrette on Indian Corn, Lima Squash, Beets and Parsnips, Mauran's aged Horse, Johnson's Process of making Butter, Smith's Process of making Cheese, Davenport's mode of making Pine Apple Cheese, Hawley's method of making Cheese, Smith's method of making Cheese.

E. *Farmers' Club.*—Proceedings of two Meetings; B. G. Boswell on the Cultivation of Fruit, also on seedling Fruit Trees; Poudrette as a Fertilizer, by D. K. Minor; Effects of Poudrette on Indian Corn, by Anthony Dey; Remarks on Pruning, by D. Jay Browne.

F. Conversational Meetings.

G. Report of the Board of Managers of the Sixteenth Annual Fair.

H. Agricultural Address, delivered before the American Institute, by J. E. Teschemacher, Esq., of Massachusetts.

I. Report of the Proceedings of the National Convention of Silk Growers and Manufacturers, held in New-York, October 13th and 14th, 1843.

J. List of Cattle, Horses, Sheep, &c., exhibited at the Sixteenth Fair.

K. Accounts of sales of Flour, Mess Beef, India Pork, Prime Mess Pork, Good American Butter, Grease Butter, Lard, Cheese and Tallow, made in London, in 1843, showing the nett proceeds to the farmer, together with the freight from New-York to Liverpool, January 26th, 1844.

L. Expenditures of the Sixteenth Annual Fair, and of the Repository and Library of the Institute for the year ending March 31st, 1844.

(A.)

TRUSTEES OF THE AMERICAN INSTITUTE.

James Tallmadge, *President.*
Adoniram Chandler,
William Inglis, *Vice Presidents.*
Shepherd Knapp,
T. B. Wakeman, *Corresponding Secretary.*
G. J. Leeds, *Recording Secretary.*
E. T. Backhouse, *Treasurer.*

Board of Managers of the 16th Annual Fair.

City of New-York.—Jas. Van Norden, *Chairman*, Edward Clark, *Vice Ch'n*, George R. J. Bowdoin, *Secr'y*, John Campbell, Adoniram Chandler, H. W. Childs, George C. De Kay, Joseph Torrey, Philip Schuyler, John D. Ward, Gurdon J. Leeds, Joseph Cowden, Edward T. Backhouse, Joseph Curtis, George Endicott, James R. Smith, Neziah Bliss, A. D. Frye, T. B. Stillman, James Hamilton, William Hall, Martin E. Thompson, Isaac Fryer, Robert Lovett, Charles W. Copeland, S. S. Bowman, Henry Meigs, T. B. Wakeman, W. P. Disosway.

Auxiliary Managers for the country.

Brooklyn, &c. Kings County.—William Conselyea, Alden Spooner, Cornelius Bergen, Rosewell Graves.

Poughkeepsie, Dutchess County.—M. Vassar, R. S. Livingston, Henry Concklin.

Ulster County.—Jas. N. Mitchell, Edmund Bruyn, Abraham Deyo, Peter H. Brink.

COLUMBIA COUNTY.—Edward P. Livingston, Wm. B. Ludlow, Jonathan Stott, Cyrus Curtis.

DOBB'S FERRY, WESTCHESTER COUNTY.—James A. Hamilton.

RICHMOND, S. I —Samuel Akerly.

ORANGE COUNTY.—N. Jones, Gilbert O. Fowler, Joel Wheeler.

SULLIVAN COUNTY.—Jas. C. Curtis.

DELAWARE COUNTY.—Martin Keeler, Noah Dimmick.

CITY AND COUNTY OF ALBANY.—E. P. Prentice, Archibald McIntyre, Caleb N. Bement, John P. Veeder, Luther Tucker.

TROY AND RENSSELAER COUNTY.—Geo. Tibbitts, Benjamin Marshall, John Sampson, Richard P. Hart, Alexander Walsh, Henry Burden, H. D. Grove, Amos Briggs, A. Van Volkenburgh.

ITHACA, TOMPKINS COUNTY.—William Humphrey, Levi Hubbell, A. B. Pugsley.

UTICA AND WHITESBORO', ONEIDA COUNTY.—Jessee W. Doolittle, Wm. S. Walcott, S. Newton Dexter, Charles P. Kirtland, John H. Ostrom.

SARATOGA COUNTY.—George W. Hall.

CANANDAIGUA AND GENEVA, ONTARIO COUNTY.—John Grieg, Charles Seymour, Robert L. Rose.

ROCHESTER, MONROE COUNTY.—E. F. Smith, Jonathan Childs, Charles M. Lee, Henry O'Reilly, Frederick Starr.

DANSVILLE, CHAUTAUQUE COUNTY.—Lester Bradner.

SYRACUSE, ONONDAGA COUNTY.—Elijah Rhodes, Thomas Spencer, George Geddes.

OGDENSBURGH, ST. LAWRENCE COUNTY.—Anthony C. Brown, James G. Hopkins.

LIVINGSTON COUNTY.—G. W. Patterson.

FULTON COUNTY.—J. G. Ward.

YATES COUNTY.—C. Masten.

ERIE COUNTY.—Lewis F. Allen.

NIAGARA COUNTY.—Peter B Porter, Jr.

GREENE COUNTY.—A. Van Bergen, T. B. Cooke.

STEUBEN COUNTY.—Z. A. Leland.

HARTFORD AND WINDSOR, CT.—Philip Ripley, Hezekiah King, J. B. Colt, Martin Ellsworth.

NORWICH, CT.—Calvin Goddard, J. G. W. Trumbull, William C. Gilman, John Breed.

NEW-HAVEN, CT.—Henry Whitney, James Brewster, Wm. K. Townsend.

BRIDGEPORT, CT.—Lemuel Coleman, Eli Gilbert.

NEW-BEDFORD, MASS.—Anthony D. Richmond.

PROVIDENCE, R. I.—James J. Simmons, Wm. Rhoades, Amasa Sprague, Philip Allen.

JERSEY CITY, N. J.—David Henderson, Henry Steele.

NEWARK, N. J.—Wm. E. Layton, James Miller, Peter Duryea, Ira Merchant.

BELVILLE, N. J.—George Bird, Joseph Kingsland.

PATERSON, N. J.—John Colt, Abraham Godwin.

Board of Agriculture.

Jeremiah Johnson, Brooklyn, L. I.; Charles Henry Hall, Thomas Addis Emmet, Harlem, N. Y.; Henry Whitney, New-Haven, Conn.; Nicholas Wyckoff, Bushwick, L. I.; Isaac Adriance, John O. Choules, Samuel Stevens, Edward Clark, Philip Schuyler, Thomas Bridgeman, John B. Jarvis, Henry Meigs, R. W. Harrison, Isaac M. Ely, city of New-York; Samuel Walker, Roxbury, Mass.; David Haggerson, Watertown, Mass.; Ezra P. Prentice, Joel Nott, Albany, N. Y.; B. V. French, Braintree, Mass.

(B.)

REPORTS OF JUDGES.

Report of the Committee on Horses, Jacks, &c.

The undersigned, a committee on horses, mules and asses, report to the American Institute the result of their investigation.

They would, in the first place, remark that the number of animals were limited; some of them of much excellence, and others below mediocrity, especially the stallions. The committee therefore commence with the mares, viz:

No. 6. "Polly Hopkins," owned by Robert L. Stevens, Esq., of Hoboken, N. J., a thorough bred race mare, by "Virginian;" dam by imported "Archduke." This animal is of great beauty, of fine size, and has most of the requisites necessary in the horse. She has been noted in this country as a great racer, and in England as a brood mare; to which country she was sent by her owner for the purpose of breeding from the best stock in that country, and brought back with her produce to this city. This circumstance is noticed as showing that we have in this country, persons of spirit and judgment, who will forego expense to the end of adding to the general benefit, among whom, the above fact proves Mr. Stevens to be one. By the side of Polly Hopkins was a fine horse colt by "Trustee." The committee recommend the first premium.

No. 4. "Gulnare," owned by Mr. John H. Coster, of Westchester, N. Y., a thorough bred mare, by "Duroc," out of Sport's mistress. This mare is of large size, good form and has proved to be a good breeder; is now in foal. The committee recommend the second premium.

No. 1. Betsey Wilson, owned by Henry Watson, Esq., of East Windsor, Conn.; a noted race mare, bred by Gen. Emory of Maryland. The dam of the noted race mare, "Lady Clifden." Betsey Wilson was by "Ratray," and dam by Ogle's "Oscar." This mare was a capital racer, and last year won the gold medal of the Institute. From her blood and form, the committee consider this mare as a valuable acquisition in a breeding stud. She is in foal by "Jim Crow," a full blooded horse, owned by Mr. Watson. The committee recommend a diploma.

No. 7. "Indiana," owned by Doct. John A. Pool of New Brunswick, N. J.; a running mare, bred in Virginia by "Sir Archy," dam by "Constitution." This animal is of pure blood, and a fine one, and has hitherto taken a medal of the Institute. An award of a diploma is recommended.

No. 2. "Young Lady Lightfoot," by "Shark," out of old "Lady Lightfoot," never having been put to the horse, was not entitled, in the opinion of the committee, to a premium; at the same time they would remark, that she came up to the point of superior excellence of the highest breeding, possessing great beauty, uncommon fine action, and high spirit. The committee recommend an award of a diploma, expressive of their high opinion of this fine mare, now intended for breeding, to be presented to Mr. C. Mullett Hall of Harlem N. Y.

No. 3. A grey mare, having a colt by her side, no doubt a serviceable animal, but totally unfit for benefiting the community as a breeding mare, being of a mixed breed of Canadian blood.

No. 5. A grey stallion, exhibited by Henry Vandewater of N. Y. This horse is stated to be of Canadian blood, seven years old; a fast trotter and walker, and of good size. The committee consider the horse to be of a mixed breed, recommend a diploma.

No. 11. A beautiful sorrel colt, six months old, by "Trustee," dam, Polly Hopkins; owned by R. L. Stevens, Esq. of Hoboken, N. J. The committee consider this the best colt presented under two years old, and recommend a silver cup.

No. 1. Imported Spanish jack, presented by Doct. J. A. Pool of New Brunswick, N. J.; no competition. This jack having taken the silver cup last year. A diploma recommended.

No. 3. A pair of working mules, sisters, four and five years old; entered by Robert L. Stevens, Esq. of Hoboken, N. J. The committee recommend the first premium, silver cup.

EDWARD LONG, *Chairman.*

Niblo's Garden, October 20th, 1843.

Report of the Committee on Sheep.

The committee appointed to examine and judge upon the merits of sheep at the Sixteenth Annual Fair of the American Institute, beg leave to report that they have given close attention and impartial examination to all the animals brought before them, and have decided to the best of their judgment and belief. In doing so, they have been guided by this principle, that premiums only should be awarded to such animals as in their judgment possess certain qualities and characteristics fitting them to propagate their species. Like begets like, is an important maxim with all breeders ; believing this view of the case to be the primary one had in contemplation by the Institute in offering rewards on stock *suitable* to breed *from.*

Your committee would remark further, that they have to regret there were no second premiums offered on sheep, as there were quite a number worthy of such reward, and but little inferior to those on which we have been obliged to decide as the best. The competition we think was altogether too *limited* to induce farmers hereafter to bring out their sheep on such occasions as the present. The show of stock at fairs must necessarily be attended with great expense and trouble, and on this account alone, it will need the most liberal encouragement from all such institutions, to keep up and perpetuate the right spirit for the better improvement of our stock of animals in this country. We award as follows:

LONG-WOOLLED SHEEP.

Best buck, No. 10—George Monteath, Albany, N. Y. Cotswold breed.

Best ewe, No. 1—Charles Blackbourne, Bedford, L. I. Lincoln breed.

Best lamb, No. 1—Charles Blackbourne, Bedford, L. I. Lincoln breed.

MIDDLE WOOLS.

Best buck, No. 5—Obadiah Elliot, New-Jersey, Southdown breed.
Best ewe, No. 6—Francis Rotch, Otsego Co., N. Y. do
Best lamb, No. 6, do do do

FAT WETHERS.

J. McD. McIntyre, Albany, N. Y., for the best Southdown and Cotswold breed.

Your committee are happy to state, that after our report was made up thus far, we have been instructed by the authority of some of the managers, that diplomas would be awarded to such other animals as we may deem entitled to notice. Such, we think, an imported ewe and lamb, very fat and large, No. 8, of the Leicester breed, owned by William Pirnie, Harrisontown, Westchester Co., N. Y. Also, a fat dry ewe and two lambs, No. 3, owned by James Broodie, Leicester breed. Also, for a Southdown buck, No. 4, of great size and good figure; owned by J. McD. McIntyre. Also, for a pen of six ewes, No. 7, Bakewell breed, owned by John Beatty, Morris Co., N. J. Also, to Charles Blackbourne, for a fine Lincolnshire buck, two years old. We would beg to remark further, that the lot of bucks exhibited by George Monteath, were very fine.

All which is respectfully submitted.

L. D. CLIFT,
SAMUEL WAIT, Jun.
JAMES R. CRAIG,
Committee.

Report of the Committee on Horticulture, in conjunction with the Agricultural Board of the American Institute, at the 16th Annual Fair, October, 1843.

The several committees of judges, in all their respective departments, having furnished to the managers of the fair, distinct reports on such subjects as came under their supervision, it devolves on this committee to "gather up the fragments which remain, that nothing be lost."

The undiminished interest manifested at this anniversary, as well by contributors as the multitude of visitors, has been highly gratifying to your committee. What more pleasing scene can greet the eye of the true patriot than these exhibitions? Who such public benefactors, as the tillers of the soil?

It has been well remarked that horticulture, from superior cultivation and great skill being employed, is the foundation of perfection in agriculture. By good culture, wild and bitter roots become wholesome and delicious esculents. Fruits before acid and dwarfish, bend their branches with golden and delicious clusters, and flowering trees, which in a wild state are stunted and feeble, put on an ampler and more diversified coronal of beauty.

Half a century has not elapsed since the formation of the first Horticultural Society in London. In this comparatively short period, by the energy and unanimity of its members, the most important results have been effected. By its proceedings, the light of instruction has beamed upon distant lands; the comforts of human life have been augmented, and cultivation promoted in a most astonishing degree. The beautiful perfection which we have witnessed in the various articles exhibited at this anniversary, is the best evidence that can be adduced of what men can achieve, when they cordially unite for the accomplishment of a great object.

It is only within the last seven years that the American Institute first attempted to connect agriculture and horticulture with their other designs. A votary in the cause, being confined at home by sickness, sent a few articles to a friend of his in New-York, as a nest egg to begin with, which were exhibited on a rude plank, in a secluded part of the fair. This individual, in pursuance of the same object, sent a larger lot the year following, and induced some of his neighbors to associate themselves with him. On this occasion, they were enabled to cover two planks, which were encircled by a wreath made from a grape vine, attached to the scantling by way of decoration. These were the small beginnings of that period. More enlarged views were evinced the next year by enterprising gardeners. A small room about twelve feet square, was allotted for their exhibition, which comprised a few varieties of garden products, such as cabbage, potatoes, pumpkins, squashes, &c., with a meagre collection of flowers, and samples of inferior corn. A spirit of rivalry was now created, and succeeding years have witnessed a becoming emulation, which is destined to reclaim the wilderness and confer inestimable blessings on mankind.

At this sixteenth anniversary, the floral department, ever a source of attraction to minds imbued with a love of the beautiful in nature, has afforded additional interest to those who delight in witnessing these perfect specimens of Flora's delicate pencillings. The admiration excited by the rich displays, evinced that the culture of flowers has a most happy tendency to elevate the moral character.

> "Oh, ye are beautiful, sweet flowers to view;
> Creative wisdom shines in every hue:
> Ye raise the mind, improve the human heart,
> And goodly lessons gracefully impart."

From professional gardeners, specimens of American seedling dahlias were exhibited, decidedly superior to any before produced in this city. Indeed the splendor of all the varieties was such, as to exceed the warmest anticipations of the friends of floriculture. With a zeal truly commendable, a lady of Brooklyn caused frequent renewals of flowers to be made during the exhibition. Such devotion to the cause betokens a spirit which we hope will be fostered by the enlightened ladies of America.

The fair daughters of the City of Elms, (New-Haven) at their late horticultural exhibition, by their refined taste in decorating the rooms appropriated to the occasion, rendered it a most delightful spectacle. A sisterly band of about thirty heartily co-operated in the undertaking, and well did they perform their task. The influence of this example it is to be hoped will have its due weight in prompting to its general imitation.

The display of fruit was excellent. Remarkably fine specimens grown in the Empire State were exhibited, but we regret to announce that they were few and far between. This circumstance may be attributed to the fact of our cultivators having contributed to exhibitions in this and the adjoining states. Head-quarters were thus exposed to the vigorous and determined rivalry of distant competitors. Massachusetts, the first bold champion in the cause of liberty, and which so valiantly defended that tree, the fruits of which are so proudly exemplified by the American Institute, has by the skilful tactics of her veteran chief, (Mr. Walker,) completely surprised our camp and captured our medals, exercising, however, the most friendly feelings towards the vanquished. This unexpected defeat should neither create dismay nor discouragement. The next campaign may teach the importance of *unity*, and convince our eastern neighbors that the roots of our trees are imbedded in good soil, and that the branches thereof produce fruit which, like the genuine Knickerbockers themselves, will bear a comparison with the best samples in our confederacy. Cultivators of this great State, be up and doing; your rivals are again preparing for the contest, the most laudable one in which man can possibly engage, that of promoting the health, and ensuring the sustenance of his race, by making the gardens and fields of this highly favored country yield their full measure of abundance.

The object of this committee has been to make the horticultural room a House of Representatives to all contributors. The managers of the Institute will publish in their list of premiums the names of the most fortunate competitors. It therefore devolves upon us to notice in this report the names of those who did not obtain the leading prizes, but who are still entitled to a favorable distinction for the respective productions entered by them for competition, also to describe such articles as were distinguished by any extraordinary properties, and which would otherwise pass unnoticed.

Apples—twelve varieties.

Alexander, Baldwin, Bell Flowers, Fall Pippin, Gloria Mundi, Golden Russett, Grand Sachem, Hawthornden, Lady Apple, Lancaster, Newtown Pippin, Porter Apple.

Grapes—sixteen varieties.

Black Hamburgh, Black Prince, Black St. Peters, Black Westminster, Catawba, Frankendale, Golden Chasselas, Grizzly Frontignac, Isabella, Red Hamburgh, Regne de Nice, White Frontignac, White Portugal, White St. Peters, White Sweet Water, and White Syrian.

Pears—ninety varieties.

Alpha, Angleterre Noisette, Angeligne de Rome, Archduc Charles de Austriche, Austrasic, Autumn Superb, Bartlett, Beurre d'Ardenpont, Beurre d'Aremberg, Beurre Bose, Beurre Brown, Beurre Diel, Beurre Dore, Beurre d'Roi, Buerre Gris, Beurre d'Hiver, Beurre Rance, Beurre d'Ronville, Beurre Royale, Beurre Van Mons, Belle Lucrative, Belle et Bonne, Belle Henriette, Belle d'Martigny, Belmont, Bishop's Thumb, Black Worcester, Blanquet d'Hiver, Bonne d'Malines, Buffurn, Bergamotte d'Pentecote, Bergamotte d'Pacques, Bozi d'Montigney, Catilac, Cavalier, Chaumontelle, Colmar d'Automne, Columbia, Comprette of Van Mons, Cumberland, Delices d'Gedoigne, Dix, Doyenne Blanc, Doyenne Dore, Doyenne d'Hiver, Duchess d'Angoulême, Dumortier, Easter Bergamotte, Easter Beurre, Epine Dumas, Epine d'Hiver, Fanunga, Flemish Beauty, Fondante d'Bois, Franc Real, Gansel's Bergamotte, Gilogil, Glout Morceau, Gores Heathcot, Green Pear of Yair, Jaminette, Kenrich of Van Mons, Lewis, Louise Bonne de Jersey, Marie Louise, Marquise, Monsieur le Cure, Napoleon, Ne plus Meuris, Passe Colmar, Poire de Cure, Poire d'Loire, Poire d'Rallay, Pope's Quaker, Princess St. Germain, Princess of Orange, Queen Caroline, Rouse Linch, Ronville Beureau, Sabine, Seckle, Striped St. Germain, St. Michael, Summer Thorn, Surpasse Virgalien, Urbaniste, Uvendales St. Germain, Verte longue d'Automne, Verte longue d'Panache, Vicar of Wakefield, Vergalien, Wilhelmina, Winter Nelis.

The subjoined list of various fruits we consider as entitled to especial notice, a proportion of which having been brought in after the premiums were adjudged. From Edward Cromwell, of Kingsbridge, one bushel of lady apples, being a sample of two thousand bushels. From R. L. Pell, of Pelham, N. Y., three fine samples of apples, viz. yellow and green Newtown pippins and lady apples. From George C. DeKay, New-York, two bushels of excellent pears. From R. T. Underhill, Croton Point, N. Y., a fine collection of Isabella and Catawba grapes, together with a quantity of fine quinces and Newtown pippins. From Jacob Hendrer, Glenham, N. Y., a grape vine, containing eighty bunches of fine grapes. From F. O. Wakeman, Bergen, N. J., six ox apples, average weight one pound. From Joseph L. Franklin, Flushing, L. I., twelve ox apples, some of which weighed eighteen ounces. From Charles M. Graham, jr., Content, Harlem lane, N. Y., fifty fine quinces, gathered from one tree. From H. L. Hotchkiss, New-Haven, Conn., one bell pear, weighing thirty-three ounces.

Amongst Mr. Reid's pears, we noticed several fine specimens of Uvendale's St. Germain, the average weight of which was one pound, In Mr. Walker's lot of pears, were specimens of three crops of the present season. William R. Prince, of Flushing, brought two seedling peaches, Oct. 24th, one of which was ripe and the other beginning to ripen. Mr. J. B. Mantel, Forty-sixth-street, Bloomingdale, N. Y., produced fifty-three varieties of the most celebrated autumn pears, together with several dwarf-bearing apple trees, about thirty inches high; also a dish of medlars, a remarkably rare fruit with us. We regret that Mr. Mantel's pears were deteriorated by over ripeness before the decision of the judges. Mr. Daniel Bole, of Bloomingdale, exhibited an orange tree, two feet in height, the fruit of which measured fourteen inches in circumference; also several other articles which were creditable to his establishment. We cannot close without noticing two branches of the Cedar of Lebanon, with cones in a mature state, from T. Ash, Throg's neck, N. Y.; also a lot of raspberries grown by Thomas Crummins, gardener to Thomas Addis Emmet. Liberal contributions of grapes were exhibited, the most prominent of which were adjudged by the inspecting committee.

In the vegetable department were several fine specimens of edible plants and roots of the following species, from various contributors: beets, beans, cauliflower, cabbage, capsicums, carrots, cucumbers, celery, egg plants, horse radish, onions, okra, parsnips, potatoes, pumpkins, salsify, squashes, tomatoes, turnips, &c.; also the following rare productions: a fine lot of the globe artichoke, a luxury scarcely known in this part of America, but highly esteemed in Europe: they were raised by Samuel Ruth, gardener to John Beekman, who also exhibited seventy potatoes, measuring three pecks and weighing forty-three pounds, the produce of one tuber. R. L. Colt, of Paterson, N. J., forwarded one bushel of pink-eyed potatoes, which he represents as yielding six hundred bushels to the acre. R. L. Pell, of Pelham, Ulster county, N. Y., produced several fine samples of different varieties, amongst which were Egyptian kidney, red Maine, and some very handsome pink-eyed kidneys, which yielded 432 bushels to the acre. Mr. P. states that they were planted near the end of May, and gathered about the middle of October. A peck of extra fine potatoes denominated *perfection*, were sent from the garden of T. A. Emmet, Mount Vernon, N. Y. Twenty-one varieties of potatoes, viz. round pink-eyes, western red, flesh color, long pink-eyes, foxites, St. Helena, early kidney, St. Marie, Liverpool blues, rohan, together with ten varieties of seedlings not named, were forwarded to the Horticultural Room by Alexander Walsh, of Lansingburgh. J. B. Townsend, of Newtown, L. I., deposited a bushel each of two varieties of very superior potatoes. Baskets containing a peck each, were received from the following persons, all of which we consider entitled to especial notice: Eugene Bogart, Bloomingdale; S. Fleet, Hastings, N. Y.; J. Outhouse, Croton, N. Y.; Wm. A Stone, Rahway, N. J.; T. B. Wakeman, Bergen, N. J.; and Berlin Wilson, Croton, N. Y.

Of pumpkins, there were as there ever should be, a full and fair representation—for a thanksgiving day, especially in the New England states, would be a gloomy affair, were it not enlivened by that national repast—a pumpkin pie. William J. Cantelo of Weehawken, New-Jersey, produced the annexed varieties. Mammoth smooth skin, Turk's turban, and green scored. The seed of these varieties were collected by Mr. C., during his late visit to Europe. Simon Pabor exhibited four cream pumpkins, weighing together three hundred and fifty pounds, produced from one vine, raised at his garden 125th-street Harlem, N. Y. Four fine mammoth pumpkins were sent in, two by Mrs. Phœbe Dar, one by Mrs Ray, Bloomingdale, and one by W. H. Varian, 28th-street New-York. A large Spanish cheese pumpkin, weighing 118 pounds was produced by G. W. Andrews of New-Jersey. From S. B. Townsend, Newtown, L. I., three fine mammoth and three cheese pumpkins were also received, as well as several other good specimens from different growers. It may be here observed that large pumpkins are not so well adapted for family use as those of medium size; they may, however, after being boiled, be worked up with wheaten flour into bread, for which purpose they are fully equal to Indian meal. The knowledge of this fact may prove advantageous to farmers living at a distance from cities, as they may find a readier market for their grain or meal than for their pumpkins.

Of the several varieties of the squash, some are good for pies, being even sweeter than the pumpkins. Other descriptions prove a good substitute for turnips, which cannot be raised in perfection, in the summer season of our climate, heat being unpropitious to their growth. Our attention was directed to the following lots. Nine cocoa nuts, raised from one seed, by William Reid, at the Murray Hill Nursery, weighing together 436 pounds. One large Valparaiso, weighing 120 pounds, from C. F. Miller, Little Falls, N. J. Three fine white crooked neck, from J. Meserole, Bushwick, L. I. Three green fluted, from J. Cantelo. Several fine specimens of the squash were also produced from seed furnished at the Repository of the American Institute, which were cultivated by the following persons: Capt. Munson of Saysville, L. I.; J. Strachan, Waterford, N. Y.; Alexander Walsh, Lansingburgh, N .Y.; J. J. Van Houten and T. B. Wakeman, Bergen N. J. Did the limits of this report admit, other species of vegetables might be enumerated. We cannot however, avoid adverting to a large head of cabbage, weight 30 pounds from Jacob Vreeland, Bergen N. J., and two very fine lots of green peas, one raised by John W. Wood, gardener to Mr. Perril of Bloomingdale, and the other by John Boyce, gardener to F Schuchardt, New Brunswick, N. J.

The value of vegetable roots for cattle, is generally acknowleged. Beets, carrots, parsnips, potatoes, turnips, &c., furnish nutritious provender for winter consumption. Of these there were several fine lots from various contributors. In the new edition of the Young Gardener's Assistant, are the following observations on beet culture, which may prove servicable to agriculturists.

"An acre of good rich soil has been known to yield two thousand bushels of beet roots, some of which weighed from fifteen to twenty pounds each. To produce such enormously large roots, they should be cultivated in drills, from two to three feet apart, and the plants thinned to ten or twelve inches in the rows. It is generally conceded, however, that moderate sized roots contain more saccharine matter in proportion to their bulk, than extra large roots, and that twenty tons, or about seven hundred bushels, is a very profitable crop for an acre of land, and would be amply sufficient to feed ten cows for three or four months of the year. A gentleman of great experience, in Connecticut, computes the product of one-fourth of an acre of good land, at eight tons, which he says will support a cow for a whole year. He allows five tons to feed on for nine months, and the other three tons to be sold, and the proceeds to be applied to the purchase of other food, to be given from the time the roots fail in the spring, until new ones are produced."

In the agricultural department, we consider the following articles as entitled to especial distinction: Two bushels of white flint wheat, from R. L. Pell, of Pelham, which averaged sixty-two pounds each, and yielded at the rate of seventy-eight bushels to the acre; also, from the same gentlemen, one bushel of rye, sixty pounds; one bushel of oats, forty-four pounds; one bushel of buckwheat, and forty ears of fine yellow corn. From W. J. Townsend, of Astoria, L. I., one bushel of white Virginia wheat, weight, sixty-one pounds; also, forty ears of fine corn. From Isaac Briant, Springfield, N. J , one bushel of oats, weight, forty-three and a half pounds. From J. Jones, Hurlgate, one bushel of barley. From Nathan Coleman, Poughkeepsie, N. Y., one bushel of white flint wheat, weight, sixty-four pounds, which he says is a fair sample of the third crop, from the same seed, and that he has this season garnered over two hundred bushels, which do not contain a foul seed. From E. Morton, Elizabethtown, N. J., thirteen ears of white corn, propagated thirteen years without change of seed. From David Johnson, Flatbush, L. I., seventeen ears of thick cob corn, one ear of native corn, and eight stalks of Egyptian corn. From S. Van Valkenburgh, Harlem, N. Y., forty ears of yellow corn. From G. Chestmerman, Harlem, N. Y., forty ears of fine white corn. From Tunis Bell, Piermont, N. Y., six ears of white corn, averaging sixteen inches in length. From N. Wyckoff, Jr., Bushwick, forty ears of fine white corn. From J. Q. Underhill, Secanus, N. J., fifteen ears of early white mammoth corn. From H. Delafield, Hurlgate, by W. Armstrong, gardener, seventeen ears of fine white corn. From W. Richardson, Staten Island, fourteen ears of Virginia flint corn, very fine. From G. W. McClean, New-York, four extraordinarily fine ears of southern corn. Several other samples of good southern corn were exhibited by different individuals.

In the northern and eastern states, a stubborn prejudice prevails against the introduction of seed corn from the south. The falacy of this bias is placed in a strong light by the following incidents:

Several fine lots of Virginia corn were exhibited, raised from southern seed, which, after being placed in a light sandy soil in the States of New-York and New-Jersey, proved very productive, and the stalks before gathering, stood from twelve to fourteen feet high. Do not these facts sufficiently attest that our climate is perfectly congenial to many of the productions of the south? It demonstrates the gross injustice of condemnation without a trial, and that the soil of the north is in its nature as kind to the produce of the south as the *minds* of our citizens should be liberal towards its warm hearted residents.

Several samples of "Egyptian corn" were produced from various persons. James De Peyster, Flatbush, L. I., sent a fine lot, together with a sample of meal. He says that one hundred bushels can be raised from an acre of ground, and that his crop will average fifty-four pounds to the bushel. We are not, however, prepared to assert that Egyptian corn is either more palatable or more profitable than the generality of grain under cultivation. Of its productiveness in the land of Egypt, we have the testimony of Holy Writ. In Genesis, chapters 41st and 49th, it is recorded, that "Joseph gathered corn as the sand of the sea, very much, until he left numbering, for it was without number." The overflowings of the Nile with its rich deposits, no doubt are the cause of the abundant harvests which enriched the ancient realms of the Pharaoh's. In countries deprived of this source of fertility, it probably would not be more productive than the corn indigenious to their respective climates. There is, however, sound wisdom in the admonition "Prove all things, hold fast that which is good."

In the productions of the Dairy, we were agreeably surprised by the great improvements made since the last anniversary. Our Fatherland may justly boast of its fine old Cheshire, the fame of which has spread through all countries. Judging from the fine samples forwarded this year for inspection, we, too, may also claim the meed of praise for rapid advancement in the art of cheese-making. Of butter, there were also, some good samples; indeed the evidence of an improved skill in this indispensable department of rural economy, was manifested in all the various qualities forwarded to the Horticultural Room.

The list of contributors to this department are subjoined. From N. Coe, Winchester, Conn., agents, Cartwright & Harrison, 111, Front-st., N. Y., six fine imitation English cheeses; from Roswell Plummer, Brooklyn, N. Y., one box, made in Herkimer Co., N. Y.; from Edwin Smith, 170, Fulton-st., Brooklyn, N. Y., four extra fine cheeses, made in 1841; from M. Davenport, No. 3, Front-st., N. Y., one box of excellent pine apple cheese; from Case & Freeman, No. 101, Front-st., N. Y., six boxes of superior new cheese; from Cartwright & Harrison, No. 111, Front-st., N. Y., six fine imitation English, made by F. P. Whiting, Goshen, Conn.; from Samuel Perry, No. 3. Front-st., N. Y., six boxes imitation English; from Stephen Yates, Palatine, N. Y., four very fine imitation English; from C. A. Jackson, No. 29, Front-st., N. Y., one box of fine pine apple cheese; from Miss F. C. Johnson, Goshen, N. Y., one hundred pounds Orange county butter; from J. H. Smith, Montgomery Co., N. Y., one hundred and twenty pounds of Orange county butter.

We cannot close our report without adverting to other subjects, which we consider of vital importance to the well-being of the American Institute; and first, we are constrained to acknowledge, that although the managers have exercised every precaution to secure the re-delivery of whatever was entrusted to their care, yet such is the propensity of the unthinking portion of our community, to pilfer whatever may be grateful to the senses—that many such could not exercise the virtue of self-control, notwithstanding the following "*admonition*" was conspicuously printed and placed opposite the articles, throughout the Horticultural Room:

"Wisely resist temptation's pow'rs,
Taste not the fruit, touch not the flowers;
Be an exemplar, and a guide,
At this great Fair, a nation's pride."

. The perpetuation of these can only be insured by an implicit adherence to the administration of justice. In preserving inviolate every article to the object for which it was designed, by setting an example of forbearance, and self-denial to all connected with the establishment, in not allowing a particle of the articles exhibited to be consumed or taken away, until after the Fair is closed; bearing ever in mind, that the least deviation from pure rectitude may lead to results discreditable, if not destructive, to the Institute.

The true republican principle that all men are equal, should steadily be kept in view, and the obsequious deference which accumulated dollars is apt to create, ought to be at once discarded. Neither should the humble tiller, who produces in his cottage garden fruits or vegetables of superior excellence, feel the injustice of a wealthy proprietor bearing away a prize inconsiderately adjudged for the size or quantity of an article, when its quality should have determined the decision.

The wearer of a glossy superfine coat should hold no supremacy over that of unassuming homespun. Then every contributor actuated by a pure spirit of patriotism, would bring his offering as a testimonial of having the interest of a good cause at heart, and of feeling a sincere desire for its promotion. All would then be convinced that honorary distinction was alone to be attained by *merit*, and that equal justice to every contributor would be the righteous award of the judges. These officers should be selected from practical men, well acquainted with the different subjects upon which they are appointed to pass judgment. Men too firm to be biassed by adventitious causes; too honest to be influenced by a bribe, or by any other consideration. Like a citadel, these institutions should be strongly guarded by watchful sentinels, lest that deadly enemy, *corruption*, stealthily creep in and commence its sure career of ruin, dismembering that which promised a long and glorious futurity.

The recognition of these views by the American Institute, perhaps as closely as it was possible for an association of men to do so, has step by step led to the eminent position which it now maintains, and concentrated into a focus the most enlightened and enterprising cultivators of the soil. It has brought before the public eye the results of their skill and experience, at once a credit to the State of New-York and a source of honest pride to every American.

All which is respectfully submitted.

Signed in behalf of the committee on horticulture, Oct. 31, 1843.

THOMAS BRIDGEMAN, *Chairman.*

Report of the Committee on Vegetables.

The committee appointed by the managers of the Sixteenth Annual Fair of the American Institute, to judge of and express their opinions on the different vegetables submitted at the Fair for premiums, respectfully report: That they have carefully examined all the productions submitted to their judgment, and are of opinion,

That Robert L. Pell, of Pelham, Ulster county, N. Y., (M. Cunningham, his gardener,) has exhibited the choicest assortment of culinary vegetables, and is therefore entitled to the silver medal;

That John Beekman, of Sixty-first-street, N. Y., (Samuel Rush, gardener, has exhibited the best and greatest variety of vegetable roots for cattle, and is entitled to a silver medal;

That Joseph Clowes, of Harsimus, N. J., exhibited the best twelve blood beets, and is therefore entitled to the premium of The United States Farmer.

That Robert L. Pell also exhibited the best twelve sugar beets, and is entitled to the premium, The American Agriculturist;

That John Beekman also exhibited the best twelve mangel-wurzel beets, and therefore is entitled to the premium, a volume of the Cultivator;

That there was no cape broccoli exhibited;

That Christopher Allen, of Staten-Island, exhibited the best six heads of cauliflower, and is therefore entitled to the premium, Buel's Farmer's Companion;

The committee further report, that Peter Hulst, gardener to L. Wyckoff, of Bushwick, L. I., exhibited the best twelve heads of drum-head cabbage, and is therefore entitled to the premium, The Report of the State Agricultural Society;

That Thomas Bridgeman, jr., of Dutch Kills, L. I., exhibited the best twelve heads of Savoy cabbage, and is therefore entitled to the premium, Falkner's Farmers' Journal;

That Thomas Prosser, of Paterson, N. J., exhibited the best twelve carrots for the table, and is entitled to the premium, The United States Farmer;

That Joseph Clowes, of Harsimus, N. J., exhibited the best twelve roots of white celery, and is therefore entitled to the premium, Report of the State Agricultural Society;

That Frederick Bonnicamp, of Harsimus, N. J., exhibited the best twelve roots of red celery, and is therefore entitled to the premium, Dana's Muck Manual.

That Robert L. Pell, also exhibited the best six egg plants, and is therefore entitled to the premium, Bridgeman's Gardener's Assistant.

That John Brill, of Harsimus, N. J., also exhibited the best peck of yellow onions, and is therefore entitled to the premium, Falkner's Farmers' Manual;

That William Ross, of Ravenswood, L. I., exhibited the best peck of red onions, and is entitled to the premium, Smith's Productive Farming;

That Joseph Clowes, of Harsimus, N. J., exhibited the best twelve parsnips for the table, and is entitled to the premium, The American Agriculturist;

That S. Ruth, gardener to J. Beekman, Sixty-first street, New-York, exhibited the best twelve parsnips for cattle, and is entitled to the premium, The United States Farmer;

That Alexander Walsh, of Lansingburgh, N. Y., sent ten varieties of seedling potatoes for the table, and is entitled to the premium, Buel's Farmer's Companion;

That R. L. Colt, of Paterson, N. J., exhibited a peck of the best potatoes for cattle, (said to have yielded 600 bushels to the acre,) and is entitled to the premium, one volume of The Cultivator.

That John P. Haff, of Yorkville, N. Y., exhibited the best peck of white turnips, round or flat, and is entitled to the premium, one volume of The Cultivator;

That John Brill, of Harsimus, N. J., exhibited the best twelve Russia turnips, and is entitled to the premium, The American Agriculturist;

That Peter Wyckoff, of Bushwick, L. I., also exhibited the best twelve roots of long white turnips, and is entitled to the premium, Bridgeman's Gardener's Assistant;

That S. Pabor, Harlem, N. Y., exhibited the best and largest pumpkins, and is entitled to the premium, Smith's Productive Farming;

That F. O. Wakeman, of Bergen, N. J., exhibited the best twelve roots of salsify, and is entitled to the premium, Bridgeman's Gardener's Assistant;

That John Brill, of Harsimus, N. J., exhibited the best three squashes, being fine specimens of the crook-neck, and is entitled to the premium, Falkner's Farmers' Manual.

That John A. Miller, of Little Falls N. J., exhibited the best and largest squash, and is entitled to the premium, Dana's Muck Manual;

That H. W. Tibbets, of Yonkers, N. J., exhibited the best half peck of tomatoes, and is entitled to the premium, United States Farmer.

That Robert L. Pell, also exhibited the best sample of hops, not less than three pounds, and is entitled to The American Agriculturist.

The committee also recommend a discretionary premium, to be given to P. Hegone of N. Y., for the best specimens of pickles and catsup, put up in glass jars, with great elegance and beauty;

The committee further recommend a diploma for a basket of native strawberries, now in full perfection, presented by Miss Louisa M. Bennett, of L. I.

The committee further remark, that Robert L. Pell, has also exhibited a barrel of honey, made since the 20th of May, by a young swarm, which article does not appear to be referred to any committee; and also some sweet potatoes, if grown entirely outside, is proof that this valuable vegetable is fast travelling North.

The committee, considering the number, variety and excellence of Robert L. Pell's exhibition, recommend another premium, to wit: a vote of thanks from the American Institute.

The committee further report, that D. F. Maurice, of Hempstead, L. I., exhibited a half peck of Spanish chesnuts, 25 of which weighed a pound; and the circumference of several was four inches, being one-third larger than any imported chesnuts ever seen by your committee. They recommend a diploma.

That William Ross, of Ravenswood, L. I.; exhibited some egg plants, the seed of which was sown the third of June, and they were very large. He informed the committee that he had electrized the roots of these plants while growing, and exhibited the machine, which was cheap and simple. The experiments are interesting, and thereby lead others to try similar experiments. The effect of electricity, in a great variety of ways, is such as to give plausibility to the opinion that electricity affected the growth of these plants. A diploma recommended.

That George W. Andrews, of New-Jersey, exhibited the largest pumpkin, (of the Chinese variety,) weight, 118. A copy of Smith's Productive Farming recommended.

That Alexander Walsh exhibited some new specimens of berries, called roan berries. Your committee recommend that a copy of the United States Farmer be awarded.

All of which is respectfhlly submitted.

SAMUEL STEVENS,
C. M. HOVEY,
—— NEWHALL,
Committee.

Niblo's Garden, New-York, October, 1843.

Report of the Special Committe on Pears.

The committee appointed for the examination of pears presented to the Institute by Mr. Walker, of the Horticultural Garden, managed by him in Boston, Mass., report as follows:

That there were ten samples of excellent pears, and many of them new varieties; and the samples were, without a single dissenting voice, declared to be of the following qualities, viz:

No. 1—" Ronville," a pear of medium quality, rather dry and mealy, middling in size.

No. 2—" Long Green Mouille Bouche," juicy; a good, well-flavored fruit, sweet and melting.

No. 3—" Unknown," small in size, somewhat mealy, and without much flavor.

No. 4—" Cadet," sweet, juicy and a well tasted fruit.

No. 5—" Compret of Van Mons," musky in flavor, sugary and good in taste.

No. 6—" Glout Morceau, Colman d'Hiver," of fine flavor, much resembling the " Virgalien," musky, sweet and excellent.

No. 7—" Napoleon," very juicy and delicious, vinous, sweet and good.

No. 8—" Virgalien," not so juicy as the Napoleon, at the same time having high flavor, buttery, sweet, melting, and almost unequalled in quality.

No. 9—" Urbaniste," very high flavored, more juicy than the Virgalien, combined with the same sweetness and delicious melting qualities.

No. 10—" Seckle," very high flavored, somewhat astringent, sweet and good, but not equal to the Urbaniste or Virgalien.

The committee cannot close this report without an expression of their thanks to Mr. Walker, for his gentlemanly attention to them personally, as well as for his efficient aid in the department of the Institute, touching fruits and vegetables of great importance to the comfort and benefit of the community, as well as for the valuable information imparted by him.

They would recommend the presentation of a silver medal to Mr. Walker, for his samples of pears exhibited on this occasion.

(Signed.) CHARLES HENRY HALL,
HENRY MEIGS,
EDWARD CLARK,
Special committee on pears.

New-York, Oct. 23, 1843.

Report on Underhill's Vineyard.

The committee appointed by the American Institute to visit the farm of Dr. R. T. Underhill, at Croton Point, respectfully report:

That on the 8th day of October, 1843, they proceeded to the farm and carefully examined it. They were forcibly impressed with the great results obtained in the open air, of the grape culture. They found about three acres covered with Catawba, and about seventeen with the Isabella. The posts sustaining the vines are of white cedar, the upper and lower ends had been dipped in coal tar; the iron wire on which the vines are trained, had been dipped in hot coal tar. The vines, now about nine years old, were bearing as many bunches of grapes as were deemed proper for the vines to sustain. The fruit was of excellent quality; the Isabella nearly all ripe; the Catawba required a few days more to ripen perfectly.

In this noble exhibition of grapes growing in the open air, the committee felt the highest satisfaction in beholding the important fact proved, that our country can have a perfect supply of this delicious fruit.

The line of grape vines, if extended, would be about sixteen miles.

Dr. Underhill has also on his farm about 1,700 apple trees, the greater part of which are of the most valuable kinds, and are sold for the London market at high prices. The trees were bearing as much fruit as they could well sustain ; they were admirably pruned, and the apples remarkable for their fine smooth skins and perfect forms.

Dr. U. has also about 2,700 peach trees, which are in good condition and bid fair to yield fine crops.

Your committee cannot omit noticing also, some quinces growing on the farm, whose abundance, size, and full fine form, surprised them ; never having seen any equal to them.

Dr. Underhill has not only evinced knowledge, but in the execution of this admirable fruit farm, he has shown the most persevering industry. He has raised alluvial deposits of the river and placed them on this farm, to the amount of fifteen thousand loads.

Your committee have pleasure in saying that they have no knowledge of any vineyard culture of our native grapes equal to this of Dr. Underhill's, and that he deserves not merely the medal of the Institute, but the gratitude of the nation, for such a noble contribution to its stock of good things.

H. MEIGS,
ALDEN SPOONER,
Committee.

New-York, Nov. 8, 1843.

Report of the Committee appointed to inspect and examine the Isabella Vines and Grapes of H. Steele, Esq., *Jersey city.*

The committee respectfully report : That they have visited Jersey City, and after being very politely received by Mr. Steele, were shown twelve bunches of fully ripe Isabella grapes, of a rich and luscious flavor, possessing much saccharine matter and very little pulp. The bunches were very large and particularly uniform, compact and well shaped ; six berries from each bunch measured in the aggregate fifty-five and a half inches in diameter, being a fraction over three-quarters of an inch each.

The twelve bunches weighed ten and a quarter pounds, and on the 12th of September, specimens submitted to the Farmers' Club for examination were found to be fully ripe ; thus demonstrating that frost was not requisite either to ripen or give the Isabella grapes a rich flavor.

The mode adopted in pruning these vines was that recommended by Hoar, in his treatise on the subject. It consisted in cutting the stems so as to leave but two eyes or buds, the first for producing wood for the crop of the following year, and the other for bearing fruit. These branches were well loaded with bunches, and the other of a most luxuriant growth, both as to length, thickness and size of leaves. The great luxuriance and richness of the vines and fruit, may be attributed not only to the method of pruning, but the supply of manure, which was of an alkaline nature, and repeatedly applied to the roots during the season, causing numerous small white fibrous shoots to start from them at fifteen or twenty feet distance from the stem, thus affording an extra quantity of nutriment to the vines and grapes. The early ripening of the fruit and its peculiarly rich flavor, may be attributed to this source, and is recommended for adoption by those who wish for early and delicious specimens of Isabella grapes.

PHILIP SCHUYLER, *Chairman.*

New-York, Oct. 12, 1843.

Report on the Ploughing Exhibition.

The committee appointed from the Board of Agriculture of the American Institute, to superintend the ploughing contest, and the examination and testing of the several ploughs offered for premium, respectfully report:

That on the 16th of October, 1843, the said committee, together with many members of the Institute, and a large number of citizens, and military and naval officers, accompanied by the Governor's Island band of musicians, furnished by the politeness of Col. Bankhead, and the band of U. S. ship North Carolina, furnished by the favor of Capt. F. H. Gregory, availed themselves of the liberal proffer of the Jersey City ferry and Paterson Railroad companies, to take not only the persons visiting the ploughing match, but all their implements, both to and from the ground, free of expense, and for which they are entited to a vote of special thanks from the Institute.

The day was a fine one, the sky cloudless, and the sun shone with its brightest autumnal splendor; the appearance of the country scenery was beautiful, and the resounding cars in their rapid movements, and the continually varying prospects—the vast importance of the objects in view, and the anticipated multitudes in waiting to receive us, excited the most enthusiastic sensations. All arrived safely at the crowded depôt in Paterson, where the members met with a most gracious reception from the Jersey committee. The line of procession was soon formed, and such as chose, availed themselves of the carriages and omnibusses provided by the committee and under the direction of the marshal of the day, (Gen. Godwin,) moved to the Passaic Hotel. Here the two committees met as one, and organized by choosing the president of the board of agriculture of the American Institute. Gen. Jeremiah Johnson of Long Island the president of the day; and Philip Schuyler, James Tallmadge, Adoniram Chandler, and Edward Clark, of New-York, together with Andrew Parsons, William Crandall, James Close, Abraham Godwin, J. L. Morris, Philemon Dickerson and George C. DeKay of New-Jersey, and John O. Choules and Stephen Fairbanks of Boston, vice-presidents. Henry Meigs of New-York, secretary, and E. W. Dickerson of N. J. assistant secretary. The vice-presidents were appointed marshals of the day, to act under the orders of Gen. Godwin. Messrs. Johnson, Schuyler and John D. Ward were appointed judges. Gen. Tallmadge, the honored president of the American Institute was requested to open the proceedings and Gen. Johnson to direct the ploughing, and test their relative draughts with the dynamometer.

The procession then moved under the direction of Gen. Godwin, led by the two bands, and soon reached the field designated by the committee for the contest. On arrival a rostrum was found erected, and the several lots of land numbered and measured, so as to afford to all competitors an equal chance for choice of lots.

Gen. Tallmadge made a short but appropriate address in the open field to the vast collection of sturdy yeomanry attending the exciting exhibition. Gen. Johnson followed with some of his home remarks, which were duly appreciated; and directed the several competitors to advance and draw for their places. During this operation the meeting was addressed by J. E. Teschemacher, Esq. of Boston, who had been invited for that purpose, with one of his forcible agricultural appeals. The competitors then took their places at the several numbers drawn by each, having one-eighth of an acre to plough, and one hour to do the work. At the appointed signal all started, the interest was extreme; so much so, that with the aid of all the officers it was very difficult to keep the ground free from the pressure of the crowd, which however had been admirably selected, rising on each side so as to afford the numerous spectators a clear view of the field. As the work progressed the interest and excitement increased, and many persons began already to *guess* which would gain the premium. The judges were busily engaged, attentively examining the details of each man's work, and towards the close, public opinion seemed to have settled the question as to priority of merit in accordance with the opinion of the committee. The committee composing the committee of judges being all from New-York, and though practically conversant with agricultural details, yet deemed advisable, as they were appointed by the American Institute, whose sphere of operations is not limited to a single county or State, but embraces every State in the Union, and is by its charter constituted a national Institute, to associate with them the Jersey committee.

After rigid scrutiny and examination of the several ploughings, the first premium for the best work was awarded to No. 17, ploughed by Cornelius Van Winkle, with Eastman's plough ; the second to William Close, with Bergen's plough ; the third to John Swanville, with another of Bergen's ploughs. These decisions were unanimously acquiesced in by each of the several members of the committee, and sanctioned by public approbation. This affair being finished, a proper piece of ground was selected for testing the draught of the several ploughs offered for competition and premium, by the dynamometer ; this was done under the superintendence of Gen. Johnson, of Long-Island, and William Bigelow, of Hartford, Conn., who was the maker of the instrument which tested the resistance, and which was found far preferable to the one used by the committee the preceding year, being more simple in its construction and better adapted to unite the plough with the connecting chain and giving the average results with more distinctness. The same team of oxen, together with the same driver, which gained the first premium, were employed to test the several ploughs, for the purpose of giving uniformity to the draught in the several experiments; and the tenacity of the ground of each furrow was as nearly similar as possible. With these preparations the work commenced; and the intense concern shown, not only by those interested, but by many spectators, demonstrated the deep interest taken in the improvement of this, the most important of agricultural implements. Ten ploughs were entered and tested with the following results:

No.	Names of Ploughs.	Depth of Furrow.	Width of Furrow	Power applied.
		Inches.	Inches.	Pounds.
1	Bergen's,	6	12	350
2	Eastman's, or Baltimore,	6	12	450
3	Meeker's, or Bergen,	6	12	400
4	Bergen,	6	12	350
5	Scotch plough, of iron,	6	12	500
6	Empire,	6	12	450
7	Wisconsin,	6	12	450
8	Bergen's self-sharpening,	6	12	350
9	Wisconsin,	6	12	425
10	Morris,	6	12	600

The above table shows that the Bergen ploughs, of which three were tested, performed the same work with less resistance, or an easier draught, than any of the others, showing a decided superiority in this respect over all the others. But your committee do not deem the lightness of draught, though a most important desideratum, the sole requisite in deciding which is the *best plough* for agricultural purposes and other requirements, such as the character of its work, strength, durability and facility for repairs; these also are essential ingredients for the practical farmer. In applying these several tests to the above ploughs, the committee find that in the present instance, and perhaps the idea will hold good in most cases, that the easiest draught ploughs combine the greatest number of the other requisites, more pains and care being generally bestowed in their construction, and more science and skill brought to bear in the adaptation of the several parts. The first premium was awarded to Cornelius Bergen, of Brooklyn, L. I., for the best plough, called the "Self-sharpening Plough," entered as No. 8. The second premium to E. G. Whiting, of Trenton, N. J., for the second best, called the "Wisconsin Plough," and entered as No. 9. And that Eastman's, or the "Baltimore Plough," entered as No. 2, is the third best; but as no premium has been offered for the third best, your committee recommend that it should receive a diploma. By a comparison of the above results with those made at Andover, Mass., in October last, which is characterized as the "most lengthy and scientific trial of ploughs ever yet held in this country," your committee feel pleasure in finding that the New-York ploughs performed the same work with much less resistance; that in turning a furrow of six inches in depth by twelve inches in width, their most approved ploughs, made by Ruggles & Co., required a draught of 412½ pounds of power, while Bergen's, to do the same work, required only 350 pounds, thus making 62½ pounds difference in its favor. However, your committee must remark, that so much depends upon the soil being of the same tenacity, and various other considerations that necessarily must enter in making a proper comparison, that they do not mean to assert that the Empire State carries the ascendancy in the construction of a plough, entitling it to the appellation of the "easiest draught," without a more definite experiment.

During the testing of the several ploughs, which required some hours of arduous work, an address was delivered by the Hon. Henry Meigs of New-York, on the subject of the ploughing, with many happy allusions to the contrast between the peaceable contest now going on, and that which excited these States during the revolutionary struggle; his remarks were received with much applause. Gen. Tallmadge, with a short appropriate address, closed the exercises of the field.

The committees and members then returned to the Passaic Hotel, and with an appetite sharpened by the operations of the day, made havoc among the substantial dishes prepared by the goodly host. Before leaving the hotel, Gen. Johnson, in announcing the decisions of the committee to the assembled multitude, made a most happy Dutch quotation, and expressed it with the native emphasis, which gave the greatest satisfaction and was enthusiastically cheered. The line was then formed and proceeded, led by the band of music, and on arrival at the railroad depôt the company separated, taking a hearty farewell of one another, and in a few minutes the Institute committee and those who attended them arrived safely at New-York, after having spent a most joyous day.

All which is respectfully submitted.

PHILIP SCHUYLER, *Chairman.*

Niblo's Garden, Oct. 20, 1843.

Extract from the Report of the Committee on Agricultural Implements.

The committee to whom was referred the examination of certain agricultural implements, report: That on invitation they repaired to the farm of Gen. G. H. Stryker, near this city, and there witnessed the operation, firstly, of a *Corn Hiller*, exhibited by Mr. Curtis Thorp, of Binghamton, N. Y., which answered the purpose designed exceedingly well. It is composed of three beams: one central and one on each side, diverging from the clevis backward, to a width sufficient to accommodate the shares with which each beam is furnished. The outward beams are furnished with ploughshares, each designed to turn the soil out, but leaving a space of earth undisturbed of about twenty-two inches in width, which is completely turned over by a double ploughshare, affixed to the centre plough beam behind those in the diverging beams. The effect of these ploughshares scarcely needs description; suffice to say, that by cross-ploughing, the corn, etc., is effectually hilled, and the weeds eradicated. This implement admits of being set to any required width; is a valuable acquisition to the farmer who thinks the hilling mode of cultivation desirable; and the inventor is, in our opinion, entitled to the honors of the American Institute.

Secondly—A *three share Plough*, belonging also to Mr. Thorp, which is furnished with beams very similar to the corn-hiller just described; these beams are each furnished with a ploughshare, receding from each other sufficiently to allow each share to turn the soil in the same direction without the least interference with one another. The application of successive shares for ploughing particular soils is of great importance, particularly for those which are light, where deep ploughing is not required, and also for ploughing-in, instead of harrowing-in grain. Although the invention of this plough appears to be original with Mr. Thorp, he has been anticipated in the discovery, as your committee learn, by Mr. Wiard, who is also a competitor for the honors of the Institute for the same implement, as will be presently shown. Under these circumstances, your committee are unanimously of opinion, that Mr. Thorp is entitled to a diploma as a reward for his labors in improving the plough.

Thirdly—A *four share Plough*, exhibited for competition by Mr. Thomas Wiard, of Avon, Livingston Co., in this State. This plough is formed by four beams, held together by slats in the form of the diamond harrow; they are framed parallel to and at equal distances from each other; each beam is furnished with a share, which recede from each other in the manner above described. To this plough a pole is attached, to which the horses are harnessed, and by means of which the direct traction of the beams is maintained. This, and the former described implements, have handles resembling those of a plough, attached to them. The shares are bright, and though the soil was clayey and ridged, two horses drew it with apparent ease, cutting furrows, altogether, about three and a half feet in width and above six inches deep. This plough is of beautiful structure, admits of having its shares increased according to the strength of the team employed, and also of having the shares set so as to increase or diminish the width of the furrows; is, in soils favorable for its use, a most valuable agricultural implement, and is really worthy of the highest honors of the American Institute.

Fourthly—a Potatoe Digger, exhibited for a premium by Mr. A. C. Ketchum of Schenectady, N. Y. This machine consists of two parallel sides furnished with handles resembling those of a plough; they are about fifteen inches in width and two feet apart. In front is an iron plate which is intended to penetrate the earth to a depth just below the potatoes required to be dug; behind this plate, near the bottom of the sides before described, are two pullies, one on each side; and on the upper edge of the sides, about three feet behind the others, are two more more pullies, over which two endless chains revolve when the machine is in motion. These chains are connected by small iron rods, about two or two and a half inches apart, and parallel to each other. When this machine is put in motion, the earth with the potatoes is passed over the plate on to the parallel iron rods, through which the chief part of the earth first falls, and then follow the potatoes. It is clear that this machine will not act advantageously in a tough, rigid, or very wet soil. Your committee witnessed its operation in such a soil, and were not disappointed at its partial success. Nevertheless they are unanimously convinced, that the principles developed in this machine are such as to merit the encouragement of the Institute, on the ground that it will answer an excellent purpose in a light dry soil; of which Mr. Ketchum presented a satisfactory certificate; and they have no doubt it may be improved so as to operate in other soils. They therefore recommend that he be rewarded by a diploma of the American Institute.

EDWARD CLARK,
HENRY MEIGS,
MARTIN ELLSWORTH,
WILLIAM J. TOWNSEND,
Committee.

New-York, Oct. 20, 1843.

Extract from the Report of the Committee on India Rubber Goods.

To the Premium Committee of the 16th Annual Fair:

Your letter of the 5th of October, inst., advising us of our appointment as judges on India rubber goods, requested that we would give you any information as to the general state of the manufacture of that branch of domestic product submitted to our notice; such as its origin, progress, aggregate annual amount, &c. We therefore most cheerfully give you such information as we are in possession of.

First. The manufacture of India rubber is supposed to have originated with the French, as early 1790, and on a very limited scale. The article first manufactured was mostly for the use of their hospitals; such as injection-tubes, bandages, cushions, water-beds, life-preserver or bathing-belts, as they were then called, and used only by hospital patients for bathing, when in a state of convalescence. The aggregate amount manufactured at that time would not have exceeded two thousand dollars.

About the year 1795, it became an article of manufacture in England, under the control and management of a Mr. McIntosh, who discovered the art of dissolving India rubber with *naptha*, for which he obtained letters patent, and enjoyed a complete monopoly of the trade for twenty-five or thirty years, and amassed a princely fortune in the business.

Very few of these goods were imported into this country prior to 1828, owing chiefly to the exhorbitant price charged for the articles. Since the expiration of McIntosh's patent, others have engaged in the manufacture of these articles, and found it a very lucrative branch of trade in Europe. The gum or India rubber is mostly imported from Para, South America. There is some imported from the East Indies, but of a very inferior quality, owing only to their want of knowledge in gathering and curing it.

About the years 1828–9 the manufacture of India rubber was first introduced into the United States by a man in Boston, by the name of Chaffee, (a manufacturer of patent leather.) For the first year or two very little was done in the way of manufacturing, the time being mostly spent in experimenting and perfecting machinery for spreading the rubber on the cloth.

About the year 1833 a company was incorporated in Boston, under the name of the "Roxbury India Rubber Company," with a capital of $300,000, located in the town of Roxbury, Mass. During the three following years the companies below were incorporated and went into operation, viz:

South Boston	India	Rubber	Company; capital........	$150,000
Boston	do.	do.	do.	100,000
Lynn	do.	do.	do.	50,000
Suffolk	do.	do.	do.	25,000
Woburn	do.	do.	do.	10,000
Framingham	do.	do.	do.	6,000
Add the Roxbury	do.	do.	do.	300,000
				$641,000

Showing an aggregate capital in 1836, of six hundred and forty-one thousand dollars emyloyed in this branch of manufacture, being all located in the vicinty of Boston and Lynn, Mass., employing not less than eight hundred operatives, mostly females. But owing to the want of experienced workmen, and thorough knowledge of the business, the majority of the goods manufactured were of an inferior quality, and many of them worthless, (the Roxbury Company buried in one *grave*, goods that cost about $10,000.) The articles mostly manufactured at that time were carriage cloths, shoes and clothing of all descriptions, (even *stockings*, *shirts* and *under-shirts*, to be worn next the skin,) India rubber hose for fire-engines, &c. &c. By the time these companies all got fairly into operation, it was found that the wants of the country did not call for many of these goods, even had they been of a good quality. The consequence was a suspension and failure of all the companies, with a total loss of all the capital invested, with the exception of the Roxbury India Rubber Company; this one continued in operation until 1840, when they wound up their affairs, paying all their debts, and dividing a large amount to the stockholders. During the years 1835–6–7, the aggregate amount of sales annually must have been not less than $600,000, but during the years '38, '39 and '40, would not average $200,000, showing a falling off of $400,000 per annum. The Roxbury Company made many valuable discoveries and improvements in machinery, for the manufacture of the article of India rubber; and so great was considered the secret of working India rubber at that time, that no workmen were admitted into the departments where the goods were manufactured, without first giving bonds as security from the exposition of any secret connected with the operations, being hired for a term of years and with increased pay, &c. (the stock exchange records, in the city of Boston, make a sad development of the unfortunate stock India rubber companies; the widow and the fatherless alike suffered in their downfall.) Since 1839, individual enterprise has stepped into this branch of domestic manufactures, and has made, and is still making vast improvements in the manufacture of this article. Over-coats, cloth, shoes and sheet rubber is now manufactured in this country far superior to auy thing of the kind ever imported from France or England; and these articles are now taking their rank among the staple ones of our country. Seldom a merchant comes to our city now to make purchases but that he takes some articles of India rubber goods to make up his assortment, and the demand is firmly and steadily increasing for this article of domestic manufacture. There is now in the United States about fourteen establishments engaged in the manufacture of India rubber goods, such as carriage cloths, shoes, beds, hose, coats, life preservers, cushions, &c. These establishments are all on a smaller scale, and mostly, if not all conducted by private enterprise. These fourteen employ about two hundred and fifty operatives, mostly females, and are located as follows: two at Providence, R. I., three in New Jersey, one in New-York city, one in Troy, N. Y., two in New-Hampshire, three in Massachusetts, and two in Connecticut, all doing a fair living business.

The two establishments in Providence, confine themselves wholly to the manufacture of sheet rubber, and sheet rubber shoes, producing yearly about 80,000 pairs of shoes, averaging a market price of seventy-five cents per pair, and affording ample returns for the investment. The other establishments manufacture all kinds of India rubber goods; whilst the aggregate capital employed by these fourteen, must be about $120,000, and the amount manufactured and sold about $200,000 per annum.

The importations from Para, South America, of India rubber shoes (the only place in the world where they are manufactured from the sap of the tree,) is enjoyed as a regular and well organized monopoly by a few gentlemen in this city and Salem, Mass. It is very difficult to get one of these traders even to take a letter from here to Para, unless they can first see the contents of it; such is their fear that the prices current should reach that place. But the American sheet rubber shoes are fast taking the place of the imported ones, and bid fair in a few years to drive the Para shoes entirely out of market. The importation of rubber shoes from Para this present season, is about

450,000 pairs, American manufacture, say 150,000 pairs, making an aggregate for the consumption of the United States of 600,000 pairs annually.

There is a protective tariff duty on all articles of manufactured India rubber, of thirty per cent ad valorem, being of vast importance to the American manufacturer.

The article of India rubber has been successfully introduced into the army and navy of the United States. During the Florida war, the General Government had manufactured by the Roxbury India Rubber Company, an air bridge, composed of large air cylinders, made of heavy duck, saturated with India rubber, which was thrown across the Talapoosa river, 350 feet wide, remaining as a permanent bridge some months, the army passing and repassing with their guns, mounted troops, baggage wagons, &c., &c., with the utmost safety.* It is also used in our army for tents, beds, army boats, wagon covers, bathing tubs, horse covers, and various other purposes. The same company manufactured for the Government an army boat weighing 110 pounds, by which they could transport easily over streams, fifty soldiers with their travelling baggage in perfect safety. These boats were tested by actual experiment at the arsenal in Washington city, in presence of the Secretary of War and the foreign ministers. A report being made by order of the Secretary of War, approving of the boats, and giving them a decided preference over the tin, copper or wooden boats generally used in our army, the Russian minister was so well pleased with them, and satisfied of their utility for the use of the army, that he ordered a number made and sent to his government.† Consequently this branch of the India rubber trade is of vast importance to the country in case of a war.

Therefore we give it as our opinion, that the manufacture of India rubber goods ere long is to be classed with the staple manufactures of our country.

(Signed,) HENRY L. NORRIS,
J. T. ARMSTRONG,
Judges on India rubber goods.

Report on the Household Manufactures of Mrs. Voorhees.

Mrs. Betsey R. Voorhees, of Amsterdam, Montgomery county, N. Y., exhibits a trunk and case of household manufactured articles, about fifty in number, of exquisite workmanship in every respect.

They consist of blankets, bedspreads, shawls, gloves, mittens, slippers, reticules, fans, thread, sewing silk, linen shirts and pillow cases, table linen, linen handkerchiefs with thread lace borders; linen, cotton, silk and woollen hose and half-hose; needle cases; work boxes supplied with every necessary article; and a variety of other useful and beautiful articles—the whole the work of her own household, and principally of her own hands.

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* See Army and Navy Chronicle, vol. 3d, pp. 264, 273 and 281.

† See report of Col. Vose, Major Seaborn, and Major McKay, to the Adjutant-General, 2d and 3d of August, 1839, marked A., and the report of Capt. W. H. Bell, Oct. 19th, 1839, to Col. Talcott, Com. Ordnance Dep., marked B.

The glory ascribed by the great Roman poets to the matrons of the best days of that republic, may be justly ascribed to Mrs. Voorhees. Such an example is one of inestimable value to our young republic. If it should be well followed up by our ladies, our republic will never die; and from the sacred book we add, "Many daughters have done virtuously, but thou excellest them all." The committee recommend the highest premium.

H. MEIGS,
EDWARD CLARK,
A. CHANDLER,
T. B. WAKEMAN,
Committee.

Niblo's Garden, Oct. 27, 1843.

Report of the Committee to examine the Wrought Iron Gun.

The committee appointed by the Board of Managers of the Sixteenth Annual Fair of the American Institute, to examine the wrought iron gun made at the iron foundry of L. B. Ward, at the foot of Fifty-ninth-street, North river, respectfully report:

That they proceeded on the 20th of October, 1843, to the Phœnix works, foot of Desbrosses-street, to which place the gun had been removed for the purpose of being bored out and finished.

They found a thoroughly welded mass of wrought iron, weighing, as they were informed, 27,390 pounds; fourteen feet in length; and two feet eleven inches in diameter at the breech; and one foot seven and a half inches in diameter at the smaller end. This is believed to be the largest and heaviest mass of wrought iron ever forged in this or any other country. The mass appeared to be closely welded, no cracks or crevices appearing in any part of it; and the shape so nearly formed to the proper size, that very little loss must be experienced in finishing it. There are no trunnions worked upon the gun, the mounting being different from that of the ordinary ship or battery gun; and the aftermost part is much thicker than the chase or barrel, so as to resist the effect of the first force of the powder on its explosion, in a greater degree.

It also appears, that to increase its strength, its construction has all the advantage of the thoroughly-tried plan of the old stub and twist barrel, so celebrated for its toughness and strength. The centre piece being a welded mass of faggots of the best iron, and over this centre are welded what are termed *lays*, formed of tough scrap iron, all perfectly welded. These lays are spirally *wound* and *welded* one over the other, on the centre piece, so that the grain of the iron is wound around the whole gun, giving it the greatest possible strength, and offering the most effectual resistance that iron can present.

The gun is to be chambered like the Paixhan, and is to have a breech pin with large head, fitting closely and put in through the barrel, to facilitate an examination of the interior.

The forgers of this immense engine of destruction, deserve, in the opinion of your committee, great credit for the able manner in which they have executed their task.

All of which is respectfully submitted.

GEORGE C. DE KAY,
HENRY MEIGS,
MARTIN E. THOMPSON,
T. B. STILLMAN,
Committee.

New-York, Oct. 21, 1843.

Report on Hamilton's Saw-Mill for cutting Curved Lines and beveling Timber

The special committee directed to examine a Steam Saw-Mill for cutting curved lines and bevelling timber, at the same time respectfully report:—

That they have examined in conjunction with other gentlemen, Col. James Hamilton's mill for sawing ship timber, having for its object facility of construction in naval architecture which has long been desired, and the attainment of which has challenged the highest mechanical skill both in Europe and America, hitherto without success.

Your committee believe that within a few years there has been a spirit of enquiry abroad respecting ship building, which no antecedent period has exhibited, and its advancement has been proportionate. This spirit had its impulse from the late wars of England with her continental neighbors, and has since been fostered more particularly, by the rivalry for maritime superiority of the great leading naval and commercial powers of the present day. The dock-yards of both France and England, as well as our own, have sought diligently, for means of effecting the necessary curvature of ship timber by machinery, and in such a manner as that the natural form of the tree might be followed by the saw, and not interfere with, or cut the grain. After all the experiments that have been made, straight sawing only has been found practicable, and that with any degree of advantage upon straight timber alone, as the common saw will cut the grain of crooked timber, and thus weaken it. Col. Hamilton's mill has obviated the difficulties which have been, hitherto, insurmountable, and by a combination of mechanical principles, will saw crooked timber, and give it any required curvature; at the same time the saw is made to follow the mark or mould upon the tree, leaving its native strength unimpaired. This is performed with as much facility and precision, and in nearly the same space of time, that the common mill will saw a straight line in timber of the same dimensions. United with this ability to give any required curvature, is a mechanical arrangement by which, at the same time, any given bevel is imparted to the timber, while it is passing through the mill. This arrangement is based upon mathematical principles, and by turning it upon its bed by means of a lever and screw, will give to the timber any amount of bevel, more or less, with the greatest possible certainty and accuracy. The whole forms a beautiful combination of the principles of science, with practical mechanical skill.

The mill is simple in its construction, and can be managed in all its parts by any judicious workman. His bevel will always enable him to adjust readily the angle required, and his timber being laid out for the required curve, he has only to direct the saw accordingly.

This invention is one, which your committee think will mark an era in ship building. It is difficult, if not impossible, to estimate the quantity of labor economized by the invention of the common saw-mill, so various and vast are the purposes to which it is applied, and its introduction into those departments of labor where the hand alone was before available. Col. Hamilton's mill may be said to bear the same relative value for crooked timber, as the common mill bears for ordinary purposes. Its saving of labor, time, materials and expense, entitle it to this rank. All the drudgery of toil and the employment of time, which have hitherto been bestowed in sawing and hewing by the hand, are no longer required, and the economy of materials so costly and valuable, is attained in its highest degree.

Another advantage which should not be overlooked, is the greater degree of strength and durability given to the timbers and plank after being put together, when all these timbers and plank have been sawed by the mill, inasmuch as they will have a more perfect regularity of surface than the manual process could give them. Constructed as ships are, of timbers of the most varied dimensions and forms, and exposed as they are to strains so changeable in directions and quantity, the compact and perfect adjustment of the surfaces, whether regular or angular, will afford a more effectual resistance to the elements. The whole fabric of the ship is then strengthened, as any partial weakness does away the whole benefit of general strength. To the military and commercial marine, this invention, as your committee believes, will take a high stand among the improvements of modern times, and having seen one of these machines in practical operation, sawing any given angle at any required bevel, there can be no hesitation in strongly recommending the invention of Col. Hamilton as well worthy the fostering care and attention of the Institute.

The same is respectfully submitted.

GEORGE C. DE KAY,
MARTIN E. THOMPSON,
H. MEIGS,
T. B. STILLMAN,
Committee.

New York, Oct. 23, 1843.

Report on Campbell's "Self-feeding Apparatus."

The Committee appointed to examine Mr. Ethan Campbell's "Self-feeding apparatus" for supplying all kinds of steam boilers with water, beg leave to report:

That they have carefully examined the same, and have no hesitation in recommending it as the most perfect machine which has yet been invented, (as far as they know,) for the above purpose.

This machine, like many others, although simple in its operation, and easily understood from inspection, is difficult to describe without the aid of drawings; the committee, therefore, will not attempt a minute description.

It appears very effectually to accomplish the objects for which it is designed, and when put in operation requires but little if any attention from the engineer to keep the water in the boiler constantly up to the same level. This is a matter of importance in all cases, more especially for boilers in steamboats, as it probably will entirely prevent, and certainly greatly lessen the chances of explosion, and consequently the loss of life.

Mr. Campbell's self-feeding apparatus takes no power from the engine to work it as does the common feed pump: it operates by a beautiful application of the principle of hydrostatic pressure, and only requires a little steam from the boiler for its action, and this steam by being condensed, heats the water which is returned to the boiler; consequently but little heat is lost.

There is also an ingenious and simple arrangement for condensing the exhaust steam of high pressure engines, whereby the water entering the boiler, is heated to the boiling point, or 212° Fahrenheit, which will make a very great saving in the article of fuel.

A most important recommendation, and which is a desideratum in all machines, is its simplicity and durability. The apparatus examined by the committee is now in operation, attached to the boiler of the steam saw-mill, in 14th street, near the North river, and has before been at work nearly a year, supplying the boilers of a twenty-five horse power engine, using steam as we are informed, at 140 lbs. to the square inch, during which time, as far as we can learn, it has never suffered any derangement, nor required any repairs.

This self-feeding apparatus can instantly be converted into a powerful engine for throwing water, and raising the same from any depth by successive lifts, thus placing at hand the means of extinguishing fires, which is invaluable in steam navigation, and with some slight modifications in its construction may be made applicable to many useful purposes, such as raising water from ships, mines, coffer-dams, &c.

This invention is evidently the result of long, deliberate reflection, perfectly philosophical in its principles, and from the best information which the committee can obtain, is entirely original in its application, reflecting great credit upon the ingenuity, intelligence and mechanical knowledge of the inventor.

The committee are of the opinion that this is one of the most important inventions connected with the feeding of steam boilers, which has ever been presented to the public, and recommend it to the special attention of the American Institute, considering it entitled to their highest award.

EDWARD CLARK, *Ch'n*,
T. B. STILLMAN,
G. C. DE KAY,
PAUL R. HODGE,
JOHN CAMPBELL,
JOHN STEELE,
JAMES RENWICK,
Committee.

Report on Chauncey Andrews' Elevating Water-wheel.

The committee upon whom was imposed the duty of examining and reporting upon the merits of Mr. Andrews' elevating water-wheel, presented for premium at the late Fair of the American Institute, respectfully relate, that they proceeded to Paterson, N. J., where the only working wheel of this construction is in operation, and there minutely examined the whole process as seen in actual service.

The wheel is an ordinary undershot wheel, under which the stream has been slightly concentrated by a small winged dam; and the improvement consists in so elevating it in a few seconds, either entirely out of the water, or in such a position as the different degrees of high water may require, and at the same time keeping the power in continual communication with the work.

In order to effect this object, the wheel has been hung upon two levers, which are moveable and vibrate about the pinion shaft as a centre, in elevating or depressing them; thus causing the centre of the segments, (which is necessarily the centre of the water-wheel,) to move in an arc concentric with the pinion. By this ingenious contrivance, the segments will gear with the pinion at every elevation of the wheel, and consequently the quantity of water can never interfere with the work. This elevation and depression is controlled by counterbalancing weights, and may be made subject to the action of a regulator, as will appear by reference to the drawing now in possession of the Institute.

From our examination of the invention, we are of opinion that it is of the greatest practical utility in all sections where but little fall can be had to the streams, or where they are subject to any sudden fluctuations from freshets or drought. And from the ingenuity which Mr. Andrews has exhibited in constructing a wheel, which, with but comparatively a trifling expense, either for construction or repairs, is calculated to develop the hitherto latent power of our great rivers, we are of opinion that he is entitled to the highest honors of the American Institute, and the confidence of the American manufacturer. All which is respectfully submitted.

EDWARD CLARK,
N. BLISS,
Committee.

New-York, October, 1843.

(C.)

LIST OF PREMIUMS

Awarded by the Managers of the Sixteenth Annual Fair, of the American Institute. October, 1843.

AGRICULTURAL AND HORTICULTURAL DEPARTMENT.

STALLIONS.

Ezrahiah Wetmore, Westchester Co., N. Y., for the best stud horse. *Silver Cup.*

Henry Vandewater, N. Y:, for a grey stallion. *Diploma.*

BROOD MARES.

Robert L. Stevens, Hoboken, N. J., for the best brood mare. "Polly Hopkins." *Silver Cup.*

John H. Coster, N. Y., for the second best brood made. "Gulnare." *Silver Medal.*

Henry Watson, East Windsor, Conn., for a brood mare. "Betsey Wilson." (Silver Cup having been before awarded.) *Diploma.*

John A. Pool, New Brunswick, N. J., for a brood mare. "Indiana." (Silver Cup having been before awarded.) *Diploma.*

C. M. Hall, Harlem, N. Y., for a young brood mare. "Young Lady Lightfoot." *Diploma.*

Alexander Benedict Staten Island, for a grey mare. *Diploma.*

COLTS.

R. L. Stevens, Hoboken, N. J., for the best colt. *Silver Cup.*

MULES.

R. L. Stevens, Hoboken, N. J., for the best pair of mules. *Silver Cup.*

JACKS.

John A. Pool, New Brunswick, N. J., for the best jack. (Silver cup awarded last year.) *Diploma.*

IMPROVED BREEDS OF CATTLE.

BULLS.

George Vail, Troy, N. Y., for the best Durham bull. "Meteor." *Silver Cup.*

Henry Hull ,Woodbury, Conn., for the best Devon bull. *Silver Cup.*

G. M. Woolsey, Hell Gate Neck, for the best one year old bull, of any improved breed. Durham bull. "Jupiter." *Silver Cup.*

William Gibbons, Madison, N. J., for the best Durham bull calf. *Silver Medal.*

Cows.

Thomas Addis Emmet, Mount Vernon, N. Y., for the best Durham cow. "Celeste." *Silver Cup.*

William Pirnie, Harrisontown, N. Y., for the best Durham heifer. "Victoria." *Silver Cup.*

William Gibbons, Madison, N. J., for the best Durham heifer calf. *Silver Medal.*

NATIVE STOCK.

John R. Peters, N. Y., for the best native cow. *Silver Cup.*

Joseph Clowes, Harsimus, N. J., for the best native heifer. *Silver Medal.*

Bethuel Brockett, New Haven, Conn., for the best native bull calf. *Silver Medal.*

WORKING OXEN.

Benajah Ives, Cheshire, Conn., for the best pair of working oxen. *Silver Cup.*

Lambert Wyckoff, Bushwick, L. I., for the second best pair of working oxen. *Silver Medal.*

SPECIAL AWARDS.

William Gibbons, Madison, N. J., for a Durham bull. "Zero." *Silver Cup.*

Henry Whitney, New Haven, Conn., for a Durham heifer. "Cornelia." *Silver Cup.*

Henry Smith, Astoria, L. I., for a cow of great milking qualities. *Silver Cup.*

John A. Pool, New Brunswick, N. J., for a Durham bull. "Carter." *Silver Cup.*

SHEEP—LONG WOOLS.

George Monteath, Albany, N. Y., for the best buck. "Cotswold breed." *Silver Cup.*

Charles Blackbourne, Bedford. L. I., for the best ewe. "Lincolnshire breed." *Silver Cup.*

Charles Blackbourne, Bedford, L. I., for the best lamb. *Silver Medal.*

MIDDLE WOOLS.

Obadiah Elliot, Middleham, N. J., for the best buck, "Southdown breed." *Silver Cup.*

Francis M. Rotch, Butternuts, N. Y., for the best ewe, "Southdown breed," *Silver Cup.*

Francis M. Rotch, Butternuts, N. Y., for the best lamb. "Southdown breed." *Silver Medal.*

FAT WETHERS.

J. McDonald McIntyre, Albany, N. Y., for the best fat wether. "Southdown and Cotswold breeds." *Silver Cup.*

SPECIAL AWARDS.

William Pirnie, Harrisontown, N. Y., for an ewe and lamb. "Leicester breed." *Diploma.*

James Broidie, Westchester Co., N. Y., for an ewe and two lambs. "Leicester breed." *Diploma.*

J. McDonald McIntyre, Albany N. Y., for a "Southdown" buck. *Diploma.*

John Beatty, Morris Co., N. J., for six ewes of the "Bakewell breed." *Diploma.*

Charles Blackbourne, Bedford, L. I., for a "Lincolnshire" buck. *Diploma.*

George Monteath, Albany, N. Y., for "Leicester" bucks. *Diploma.*

SWINE.

William P. Moss, New-York, for the best boar. "Berkshire breed." *Silver Cup.*

Alexander Benedict, Staten Island, for the second best boar. *Diploma.*

John Giles, Providence, R. I., for the best sow. "Berkshire breed." *Silver Cup.*

John Rutter, Yorkville, N. Y., for the second best sow. *Diploma.*

TURKIES, GEESE, DUCKS AND FOWLS.

W. J. Townsend, Newtown, L. I., for the best pair of turkies. *American Poultry Book.*

William Ross, Ravenswood, L. I., for the best pair of Bremen geese. *American Poultry Book.*

Henry A. Field, N. Y., for the best pair of Mongrel geese. *American Poultry Book.*

W. J. Townsend, Newtown, L. I., for the best pair of Muscovy ducks. *American Poultry Book.*

M. Orphan, N. Y., for the best pair of common ducks. *American Poultry Book.*

H. T. Chapman, N. Y., for the best pair of imported Dorking fowls. *American Poultry Book.*

William Ross, Ravenswood, L. I., for the best pair of Poland fowls. *American Poultry Book.*

Thomas Bartine, Astoria, L. I., for the best pair of capons. *American Poultry Book.*

J. W. Goodwin, Fort Hamilton, L. I., for the best lot of Egyptian fowls. *American Poultry Book.*

S. A. Halsey, Astoria, L. I., for a pair of Chinese fowls. *American Poultry Book.*

George C. De Kay, N. Y., for a bird, (the Curracoa.) *American Poultry Book.*

Joseph Foulke, Hell Gate, N. Y., for a bird, (the Flamingo.) *American Poultry Book.*

PRODUCTS OF THE DAIRY.

J. A. Smith, Montgomery, N. Y., for the best butter. *Silver Cup.*

Miss Frances C. Johnson, Goshen, N. Y., for a good specimen of butter. *Silver Medal.*

Edwin Smith, for the best old cheese. *Silver Cup.*

P. Hawley, Norfolk, Conn., for the best new cheese. *Silver Medal.*

W. H. Davenport, 3, Front-st., N. Y., for the best pine apple cheese. *Silver Medal.*

SPECIAL AWARDS.

T. P. Whiting, Goshen, N. Y., for a good specimen of old cheese. *Diploma.*

N. Coe, Winchester, Conn., for a good specimen of old cheese. *Diploma.*

Roswell Plummer, for a good specimen of new cheese. *Diploma.*

Stephen Yates, Palatine, N. Y., for a good specimen of new cheese. *Diploma.*

Charles A. Jackson, 29, Front-st., N. Y., for a good specimen of pine apple cheese. *Diploma.*

MILK.

T. Selleck, Chester, Orange Co., N. Y., for the best milk. (Test. 115°.) *Silver Medal.*

Matthew Hanna, Oxford, Orange Co., N. Y., for the second best milk. (Test. 107°.) *Diploma.*

AGRICULTURAL IMPLEMENTS AND MACHINERY.

Cornelius Bergen, Brooklyn, L. I., for the best plough. "Self-sharpening." *Silver Cup.*

E. G. Whiting, Trenton, N. J., for the second best plough. "Wisconsin." *Silver Medal.*

J. S. Eastman, Baltimore, Md., for the third best plough. *Diploma.*

Cornelius Van Winkle, Paterson, N. J., for the best ploughing, (done with Eastman's plough.) *Silver Cup.*

William Close, Paterson, N. J., for the second best ploughing, (done with Bergen's plough.) *Silver Medal.*

John Swannell, Plainfield, N. J., for the third best ploughing. *Diploma.*

Curtis Thorp, Binghamton, Broome Co., N. Y., for a corn hiller. *Diploma.*

Curtis Thorp, Binghamton, Broome Co., N. Y., for a three share plough. *Diploma.*

Thomas Wiard, Avon, Livingston Co., N. Y., for a four share plough of great merit. *Gold Medal.*

Jonathan Conroy, 221 Houston-street, for Walters' adjusting plough stock. *Diploma.*

T. & J. C. Porter, and Chauncey Hart, Farmington, Conn., for the best ox yoke. *Diploma.*

J. S. & J. P. Newton, Woodbridge, N. J., for an ox yoke. *Diploma.*

Edward Townley, 75 Thompson-street, for the best bee-hives. (Silver medal having been before awarded.) *Diploma.*

Brown & Nostrand, West Farms, N. Y., for excellent bee-hives. *Diploma.*

Archibald C. Ketchum, Schenectady, N. Y., for a potatoe digger. *Diploma.*

J. C. Langdon, Troy, N. Y., for cultivator ploughs and drag rake. *Diploma.*

William Wallace, 414 Fourth-street, N. Y., for a threshing machine. *Diploma.*

Thomas P. Thorne, Fishkill Landing, N. Y., for a straw cutter. *Silver Medal.*

William Hovey, Worcester, Mass., for a hay cutter. *Diploma.*

George Smithson, 229 West-street, N. Y., for a straw cutter. *Diploma.*

Todd & Marshall; Stamford, Conn., for a straw cutter. *Diploma.*

Henry Warren, Troy, N. Y., for a root cutter. *Diploma.*

C. Conklin, Peekskill, N. Y., for a feed cutter. *Diploma.*

John Moore, 31 Fulton-street, N. Y., for an exhibition of agricultural implements. *Diploma.*

B. M. Freeborn, 183 Front-street, N. Y., for an exhibition of agricultural implements. *Diploma.*

John Mayher & Co., 195 Front-street, N. Y., for an exhibition of agricultural implements. *Diploma.*

Jordan L. Mott, 264 Water-street, N. Y., for the best agricultural boiler. (Silver medal having been before awarded.) *Diploma.*

FLOWERS.

William Kent, Brooklyn, L. I., for superior dahlias, including some extra fine American seedlings. *Gold Medal.*

George C. Thorburn, 15 John-street, N. Y., for a rich display of dahlias. *Gold Medal.*

Daniel Boll, Bloomingdale, N. Y., for a fine assortment of dahlias, including some fine American seedlings. *Silver Medal.*

Thomas Hogg & Sons, Seventy-ninth-street, N. Y., for a good assortment of dahlias. *Mrs. Loudon's Flower Garden.*

William R. Prince, Flushing, L. I., for numerous varieties of dahlias. *Downing's Rural Agriculture.*

Thos. Addis Emmet, Mount Vernon, N. Y., T. Cremins, gardener, for a superior display of dahlias. *Downing's Cottage Architecture.*

William Phelan & Sons, Fifth-street, N. Y., for a fine display of dahlias. *Hovey's Magazine.*

William Reed, Thirty-fourth-street and 4th Avenue, N. Y., for an excellent assortment of dahlias. *Bridgeman's Gardener's Assistant.*

William Laird, Seventeenth-street, N. Y., for an ornamental frame decorated with flowers. *Hovey's Magazine.*

James L. L. F. Warren, Brighton, Mass., for a beautiful bouquet of flowers. *Silver Medal.*

Mrs. Jeremiah Brown, Brooklyn, L. I., for a beautiful vase of flowers. *Mrs. Loudon's Flower Garden.*

J. B. Mantel, Forty-sixth-street, N. Y., for an ornamental frame decorated with flowers. *American Flower Garden Directory.*

Daniel Boll, Bloomingdale, N. Y., for numerous varieties of the rose and other rare flowers. *Mrs. Loudon's Flower Garden.*

Samuel M. Cox, Bloomingdale Road, N. Y., for a beautiful stand of flowers. *American Flower Garden Directory.*

William Beekman, 110 Ninth-st.; N. Y., for a fine supply of dahlias. *Hovey's Mvgazine.*

Isaac Buchanan, Twenty-ninth-street, N. Y., for two vases of rare flowers. *One vol. of American Agriculturist.*

To Alfred Bridgeman, J. Boyce, A. P. Cummings, William Davison, J. Ettringham, William V. Leggett, Mrs. McFarlane, George Maine, William Ross, Samuel Ruth, Grant Thorburn, Jr., L. Van Wyck, Edward White, and John W. Wood, for supplies of flowers for ornamenting the horticultural room, to each a copy of the Report of the American Institute on the subject of Agriculture.

VEGETABLES.

Robert L. Pell, of Pelham, Ulster Co., N. Y., for the choicest assortment of culinary vegetables. *Silver Medal.*

John Beekman, Sixty-first-street, N. Y., for the best and greatest variety of vegetable roots for cattle. *Silver Medal.*

Joseph Clowes, Harsimus, N. J., for twelve superior blood beets. *United States Farmer.*

Robert L. Pell, Pelham, Ulster Co., N. Y., for twelve superior sugar beets. *One vol. American Agriculturist.*

John Beekman, Sixty-first-street, N. Y., for twelve superior mangel-wurzel beets. *One vol. of Cultivator.*

Christopher Allen, Staten-Island, N. Y., for six fine heads of cauliflower. *Buel's Farmer's Companion.*

Lambert Wyckoff, Bushwick, L. I., for twelve large heads of drum-head cabbage. *Diploma.*

Peter Hulst, gardener to Lambert Wyckoff, Bushwick, L. I., for the best field of cabbage. *Silver Medal.*

Thomas Bridgeman, jr , Dutch Kills, L. I., for twelve heads of Savoy cabbage. *Falkner's Farmers' Manual.*

Thomas Prosser, Paterson, N. J., for twelve superior carrots for the table. *United States Farmer.*

J. Clowes, Harsimus, N. J., for twelve fine roots of white celery. *One vol. of Transactions of State Agricultural Society.*

Frederick Bonnicamp, Harsimus, N. J., for twelve fine roots of red celery. *Dana's Muck Manual.*

Robert L. Pell, Pelham Ulster Co., N. Y., for six large egg plants. *Bridgeman's Gardener's Assistant.*

John Brill, Jersey City, N. J., for a peck of superior yellow onions. *Falkner's Farmers' Manual.*

William Ross, Ravenswood, Queens Co., N. Y., for a peck of superior red onions. *Smith's Productive Farming.*

Joseph Clowes, Harsimus, N J., for twelve fine parsnips for the table. *American Agriculturist.*

J. Beekman, Sixty-first-street, N. Y., for twelve large parsnips for cattle. *United States Farmer.*

Alexander Walsh, Lansingburgh, for superior seedling potatoes. *Bridgeman's Gardener's Assistant.*

T. B. Wakeman, Bergen, N. J., for superior Mercer potatoes. *Silver Medal.*

William J. Townsend, Newtown, Queens Co., for a superior lot of table potatoes. *Bridgeman's Gardener's Assistant.*

S. B. Townsend, Newton, L. I., for three large cattle pumpkins. *Buel's Farmer's Companion.*

R. L. Colt, Paterson, N. J., for a peck of superior potatoes for cattle. *One vol. of Cultivator.*

John P. Haff, Yorkville, N. Y., for a peck of superior white flat turnips. *One vol. of Cultivator.*

Peter Wyckoff, Bushwick, Kings Co., for twelve superior roots of long white turnips. *Bridgeman's Gardener's Assistant.*

S. Pabor, Harlem, N. Y., for superior cream pumpkins. *Smith's Productive Farming.*

F. O. Wakeman, Bergen, N. Y., for twelve superior roots of salsify. *American Agriculturist.*

John Brill, Harsimus, N. Y., for three fine winter squashes. *Falkner's Farmers' Manual.*

John A. Miller, Little-Falls, N. J., for a fine large Valparaiso squash. *Dana's Muck Manual.*

H. W. Tibbets, Yonkers, N. Y., for a half peck of large tomatoes. *United States Farmer.*

Robert L. Pell, Pelham, Ulster Co., for a fine sample of hops. *American Agriculturist.*

Robert L. Pell, Pelham, Ulster Co., N. Y., for superior sweet potatoes. *Diploma.*

P. Hegons, 206 Greenwich-street, for superior specimens of pickles and catsup. *Diploma.*

FRUITS.

R. L. Pell, Pelham, Ulster Co., N. Y., for the best fruit farm. *Gold Medal.*

R. T. Underhill, Croton Point, N. Y., for successful vineyard culture of the native grape. *Silver Medal.*

J. L. L. F. Warren, Brighton, Mass., for twelve superior table apples. *Bridgeman's Gardener's Assistant.*

R. L. Pell, Pelham, Ulster Co., N. Y., for twelve superior winter apples. *Kenrick's American Orchardist.*

T. H. Perkins, Brooklyne, Mass., for twelve superior varieties of house grapes. *Gold Medal.*

R. S. Field, Princeton, N. J., for three superior varieties of house grapes. *Silver Medal.*

J. F. Allen, Salem, Mass., for six varieties of superior house grapes. *Downing's Cottage Architecture.*

Rev. Dr. Patton, city of N. York, for fifty-two bunches of superior Isabella grapes. *Downing's Rural Architecture.*

R. T. Underhill, Croton Point, N. Y., for superior specimens of Catawba grapes. *Kenrick's American Orchardist.*

J. L. L. F. Warren, Brighton, Mass,. for twelve superior peaches, (freestone.) *Kenrick's American Orchardist.*

John J. Van Wyck, 140 Twenty-first-st., N. Y., for twelve supesior peaches, (clingstones.) *Bridgeman's Gardener's Assistant.*

M. P. Wilder, Dorchester, Mass., for sixty-five choice varieties of pears. *Silver Medal.*

George C. DeKay, Twenty-first street, Seventh Avenue, N. Y., for a superior lot of table pears. *Kenrick's American Orchardist.*

Dr. Henderson, Jersey City, N. J., for 12 fine magnum bonum plums. *Buel's Farmer's Companion.*

C. M. Graham, Jun., Content, Harlem Lane, N.Y., for fifty-five quinces, gathered from one tree. *Kenrick's American Orchardist.*

Jacob Hendrer, Glenham, Dutchess Co., N. Y., for fine specimens of grapes. *Bridgeman's Gardener's Assistant.*

J. W. Hayes, Newark, N. J., for a lot of grapes and fine pears. *Buel's Farmer's Companion.*

John Couzens, Dobbs' Ferry, Westchester Co., N. Y., for a superior specimen of grapes. *United States Farmer.*

Wm. R. Prince, Flushing, L. I., for two bunches of native grapes, and a fine specimen of apples. *Hovey's Magazine.*

William Reid, Thirty-seventh-street, Fourth avenue, for a fine collection of pears and apples. *American Agriculturist.*

Charles M. Graham, jr., Content, Harlem lane, for a fine lot of Isabella grapes. *One vol. of the Transactions of the State Agricultural Society.*

J. J. Morris, Batavia, N. Y., for a fine specimen of pears. *Falkner's Farmers' Manual.*

Nicholas Wyckoff, jr., Bushwick, for fine specimens of Isabella grapes. *The Planter's Guide.*

J. B. Mantel, Forty-sixth-street, N. Y., for fifty-three varieties of pears and other fruit. *Two vols. of the Transactions of the State Agricultural Society.*

Joseph L. Franklin, Flushing, L. I., for twelve extra large apples. *Dana's Muck Manual.*

H. & L. Hotchkiss, New-Haven, Conn., for one pear weighing 33 oz. *One vol. of the Cultivator.*

Samuel Walker, Roxbury, Mass., for superior varieties of pears. *Silver Medal.*

Henry Steel, Jersey City, for a lot of extra fine early grapes. *Bridgeman's Gardener's Assistant.*

Miss Louisa Bennett, L. I., for a basket of native strawberries. *Bridgeman's Florist's Guide.*

AGRICULTURAL PRODUCTS.

George Chesteman, Harlem, N. Y., for forty ears of fine white Indian corn. *Two vols. American Agriculturist.*

S. Van Valkenburg, Harlem, N. Y., for forty ears of fine yellow corn. *Two volumes Transactions State Agricultural Society.*

Nathan Coleman, Poughkeepsie, N. Y., for a bushel of superior wheat; weight sixty-four pounds. *Silver Medal.*

R. T. Pell, Pelham, Ulster Co., N. Y., for a bushel of extra fine rye; weight sixty pounds. *Four volumes of the Cultivator.*

Mrs. S. Campbell, Springfield, N. J., for a bushel of fine oats; weight 43 pounds. *Planter's Guide.*

James Depeyster, Flatbush, L. I., for superior Egyptian corn. *American Agriculturist.*

Tunis Bell, Piermont, N. Y., for fine specimens of white Indian corn. *Farmer's Mine.*

J. Q. Underhill, Secaucus, N. J., for fine specimens of mammoth Indian corn. *Farmer's Mine.*

Hiram Smith, Wheatland, N. Y., N. H. Wolf, 17 South-street, N. Y., agent, for the best wheat fllour. *Silver Medal.*

Hecker & Brothers, 245 Cherry-street, N. Y., (Croton Mills,) for the second best wheat flour. *Diploma.*

Hecker & Brothers, 245 Cherry-street, N. Y., (Croton Mills,) for superior unbolted or Graham flour. *Diploma.*

W. H. Imlay & Co., Hartford, Conn., for superior rye flour. *Silver Medal.*

J. S. Quimby, Coxsackie, N. Y., for a specimen of superior honey. *Diploma.*

Gassner & Young, 132 Chatham-street, N. Y., agents for a sample of honey, part of 450 boxes from Ohio. *Diploma.*

BOOK-BINDING.

Peter Wilson, Old Cambridge, Mass., for a specimen of bookbinding, original design and new style, exceedingly well finished. *Diploma.*

John C. Rock, 152 William-street, N. Y., for good inlaid fancy morocco and calf binding. *Diploma.*

Edward Walker, 112 Fulton-street, N. Y., for beautiful Turkey morocco and velvet binding. *Diploma.*

H. & S. Raynor, 76 Bowery, N. Y., for handsome morocco and velvet binding on books of common prayer. *Diploma.*

GENT'S. BOOTS AND SHOES.

J. & J. Conrad, 56 Market-st., N. Y., for the best gentlemen's boots. *Diploma.*

John Dick, 403 Broadway, N. Y., for patent elastic shank boots, (second best.) *Diploma.*

LADIES' BOOTS AND SHOES

Benjamin Shaw, 71 Canal-st., N. Y., for the best white satin slippers, satin gaiter boots, and a superior cork sole boot. (Silver Medal having been before awarded.) *Diploma.*

Peter Laboyteaux, 265 Broadway, N. Y., for white satin slippers, and cork sole boots. (Silver Medal having been before awarded.) *Diploma.*

BRUSHES.

James H. Noe, 179 Greenwich-street, N. Y., for the best hair, cloth, painters and artists brushes. *Diploma.*

A. & J. H. Parsell's, 46 McDougall-street, N. Y., for the second best brushes. *Diploma.*

BUGGY AND SULKY RAILINGS, &c.

George Dunn, Newark, N. J., for superior workmanship on seat railing. (Silver Medal having been before awarded.) *Diploma.*

Eli Gilbert, Bridgeport, Conn., for Tomlinson's spring perch. *Diploma.*

CABINET WARE.

Nicholas McGraw, 463 Broadway, N. Y., for the best workmanship and finish on an extension sofa. (Silver Medal having been before awarded.) *Diploma.*

Williams Woolley, 142 Mulberry-st., N. Y., for the best sofa bedstead for general use. (Silver Medal having been before awarded.) *Diploma.*

Joseph T. Frith, 242 Mulberry-st., N. Y., for the best house doors. *Diploma.*

Solomon Pancoast, 242 Mott-st., N. Y., for superior polishing on mahogany doors. *Diploma.*

Alexander D. Farrell, 235 Bowery, N. Y., for workmanship on an extension sofa. *Diploma.*

James G. Holmes, Charleston, S. C., for a Therapeutic chair, for the principle of construction, Jas. & William H. Johnson, Catskill, N. Y., manufacturers. *Silver Medal.*

George Raither, 20 Catharine-st., N. Y., for a lady's work table. *Diploma.*

Moses B. Wentworth, 445 Pearl-st, N. Y., for a dressing case. *Diploma.*

Edward Wilding, 38 Essex-st., N. Y., for a fancy chair. *Diploma.*

B. H. Willis, 102 Broadway, N. Y., for a fancy hickory chair. *Diploma.*

Philip Koerber, 162 Elm-st., N. Y., for a reading table. *Diploma.*

William C. Gardener, 69 Gold-st., N. Y., for Lindley's improved bedstead. *Diploma.*

James McDuff, 10 Rivington-st., N. Y., for a rocking chair. *Diploma.*

Pierpont & Hotchkiss, New-Haven, Conn., Davenport, Quincy & Co., agents, 81 John-st., N. Y., for superior mineral knobs. (Silver Medal having been before awarded.) *Diploma.*

J. B. Gage, Thirty-seventh-street, N. Y., for the best sand paper. *Diploma.*

Henry Parsons, 18 Mercer-st., N. Y., for an ottoman. (Silver Medal having been before awarded.) *Diploma.*

CARRIAGES AND SLEIGHS.

Wood, Tomlinson & Co., 400 Broadway, N. Y., for the best carriage. *Silver Medal.*

Joseph H. Godwin, 114 Elizabeth-street, N. Y., for the second best carriage. *Diploma.*

James W. Tompkins, 183 Eldridge st., N. Y., for a cart of superior construction. *Diploma.*

John W. Whitney, Poughkeepsie, N. Y., for the best sleigh. *Diploma.*

John H. Wood, Poughkeepsie, N. Y., for the second best sleigh. *Diploma.*

CARVING.

Smith & Crane, 138 Wooster-st., N. Y., for the best carved work. *Diploma.*

Laroza, Coffee & Whitlock, 49 Fulton-st., N. Y., for the second best carved work. *Diploma.*

CARPETING.

Thompson & Co., 8 Spruce-st., N. Y., for beautiful specimens of imitation Brussels carpet. *Gold Medal.*

CASTINGS.

John Savery & Son, 113 Beekman-st., N. Y., for the best castings, (four parlor grates.) (Silver Medal having been before awarded.) *Diploma.*

Jordan L. Mott, 264 Mott-st., N. Y., for iron vases for ornamental purposes. *A copy of Ewbank's Hydraulics.*

James Walter, 296 Broadway, N. Y., for a brass model of a cannon. *Diploma.*

Francis Fevereau, 94 Cherry-st., N. Y., for cast iron spittoons. *Diploma.*

READY MADE CLOTHING.

Hutchins & Croney, 12 Wall-st., N. Y., for the best ready made clothing, (overcoat and vest.) *Diploma.*

Edward J. Olssen, 74 Bowery, N. Y., for the best childrens' clothing. *Diploma.*

Charles Herwick, 390 Bowery, N. Y., for patterns for cutting boys clothes, (deserving of commendation.) *Silver Medal.*

CLOCKS AND WATCHES.

Victor Giroud, Center-st., for a clock, (a very ingenious piece of mechanism.) *Silver Medal.*

J. R. Mills & Co., Belleville, N. J., for a 376 day clock. (Silver Medal having been before awarded.) *Diploma.*

James Rodgers, 410½ Broadway, N. Y., for a steamship metre, and a steamship clock. *Diploma.*

Eggert & Son, 239 Pearl-st., N. Y., for chronometers, Nos. 119 and 120, finished October, 1843. *Diploma.*

Andrew Meneely, Troy, N. Y., for a steeple clock. *Diploma.*

CONFECTIONARY.

Alois Peteler, Alhamra, Broadway, N. Y., for superior ornamental confectionary. *Diploma.*

James Thompson, 578 Broadway, N. Y., for varieties of fancy cakes. *Diploma.*

Alfred Hill, 208 Greenwich-st., N. Y., for superior jujube paste. *Diploma.*

COTTON GOODS.

Jacob Dunnell & Co., Pawtucket, R. I., Fearings & Hall, agents, No. 55 Exchange Place, N. Y., for the best specimen of prints, for the beauty in design of patterns and perfection in printing. *Silver Medal.*

Lee & Brewster, 113 Pearl-st., N. Y., for the second best prints. *Diploma.*

New-York Mills, Whitestown, Oneida Co., N. Y., Charles Carville agent, 31 Pine-st., for the best bleached and brown goods. (Gold Medal having been before awarded.) *Diploma.*

Phenix Manufacturing Company, Paterson, N. J., H. N. Peck & Co. agents, 130, Front-st., N. Y., for cotton sail duck. (Silver Medal having been before awarded.) *Diploma.*

Daguerreotype Likenesses and Plates.

John Plumb, 251 Broadway, N. Y., for the best daguerreotype likenesses, (for the coloring.) *Diploma.*

E. White, 175 Broadway, N. Y., for the best daguerreotype likenesses, (for the grouping and general effect.) *Diploma.*

Anthony, Edwards & Chilton, 247 Broadway, N. Y., for the second best daguerreotype likenesses, (for coloring and general effect.) *Diploma.*

John Plumb, Jr., 251 Broadway, N. Y., for an electrotype copy of a daguerreotype. *Diploma.*

T. M. L. & W. H. Scoville, Waterbury, Conn., J. B. Curtis, agent, 208 Greene-st., N. Y., for daguerreotype plates and matting. *Diploma.*

Joseph Corduan, 106 Laurens-st., N. Y., for daguerreotype plates. *Diploma.*

Dentistry.

Hartness & Clay, corner Broadway and Franklin-streets, for superior block teeth, with artificial gums. *Diploma.*

Dies and Engravings.

J. N. Gimbrede, 4 John-street, for the best of line engraving. *Diploma.*

John A. Rolph, 122 Broadway, for the second best steel engraving. *Diploma.*

B. J. Lossing, 13 Chambers-street, for the best wood engraving. *Diploma.*

Howland & Brothers, 67 Nassau-street, for the second best wood engraving. *Diploma.*

Sherman & Smith, 122 Broadway, for a superb map of the United States. *Silver Medal.*

John D. Lovett, 1 Courtland-street, for the best engraved door plates. *Diploma.*

Salathiel Ellis, for very superior cameo cutting. *Diploma.*

Joseph Wilson, Eleventh-street, for fine specimens of cameo cutting. *Diploma.*

William Tompson, 169 William-street, for beautiful specimens of bookbinder's stamps, both in design and execution. *Silver Medal.*

T. & H. Pittis, 293 Pearl-street, for very superior stencil plates. *Diploma.*

Frederick C. Key, Wallabout, L. I., for very superior die sinking. *Diploma.*

T. E. H. Ensign, 160 Nassau-street, for a map of the world. *Diploma.*

DRUGS AND CHEMICALS.

R. W. Butler, 8 Gold-street, N. Y., for the best paste blacking. *Diploma.*

William J. Roome, Eighth Avenue and Twenty-first-street, N. Y., for the best water-proof leather preservative. *Diploma.*

Thomas W. Newton, 13 Beekman-street, N. Y., for the best bottled soda water with syrups. *Diploma.*

William. Colgate & Co., 6 Dutch-street, N. Y., for the best starch. *Diploma.*

Edward N. Kent, 116 John-street, N. Y., for the best writing inks. *Diploma.*

William T. Anderson, 6 Greene-street, N. Y., for the best polishing materials *Diploma.*

Randel & Brown, 161 Bleecker-street, N. Y., for the best water-proof matches. *Diploma.*

Nowill & Co., 104 John-street; N. Y., for fine specimens of varnish. *Diploma.*

Caleb Smith & Co., 141 Front-street, N. Y., for excellent lard candles. *Diploma.*

Fryatt & Campbell, 147 Front-street, N. Y., for fine samples of sugar of lead, red lead, and white lead. *Diploma.*

G. W. Busteed, for good specimens of soap. *Diploma.*

Southwick & Prior, 64 Pearl-street, N. Y., for specimens of blue mass. (Silver medal having been before awarded.) *Diploma.*

Angus Gunn, Jersey City, N. J., for well prepared extract of indigo for dyeing. *Diploma.*

Brown & Gale, corner Twenty-first-street and Sixth Avenue, N. Y., for fine specimens of sugar of lead. *Diploma.*

Lewis Francis, 76 Maiden Lane, N. Y., for the best manifold writers. (Silver medal having been before awarded.) *Diploma.*

EDGE TOOLS AND CUTLERY.

F. Roys & Co., Berlin, Conn., for superior silversmith's tools. *Diploma.*

Leonard Pardee, New-Haven, Conn., for superior files. *Silver Medal.*

New-England Screw Co., Mitchell & Witherell, agents, 85 Maiden Lane, N. Y., for superior wood screws. (Silver medal having been awarded.) *Diploma.*

D. Bassett, Birmingham, Conn., for the best screw augers. *Silver Medal.*

F. W. Widman, Philadelphia, Pa., for a splendid assortment of swords. *Silver Medal.*

Leonard & Wendt, 29 Gold-street, N. Y., for the best tailor's shears. (Silver medal having been before awarded.) *Diploma.*

Leander Lacky, Wilkinsonville, Mass., for tenon cutters, (a valuable tool.) *Diploma.*

Mansfield & Holman, Smithfield R. I., White & Fleury agents, 100 John-st., N. Y., for superior scythes. *Silver Medal.*

John C. Nixon, 70 Bowery, N. Y., for superior razors. *Diploma.*

Simeon Broadmeadow, Manyunk, Pa., for fine specimens of cast steel. *Silver Medal.*

Downes & Wilson, Newark, N. J., for shoemakers' rasps. *Diploma.*

Aaron Crawford, Newark, N. J., Long, McGowan & Co., agents, 10 Platt-street, N. Y., for shoemakers' and saddlers' tools. *Diploma.*

M. C. Sandford, Meriden, Conn., for specimens of skates. *Diploma.*

Hoe Printing Press and Saw Manufacturing Co., 29 & 31 Gold-street, N. Y., for a very superior exhibition of saws. (Gold medal having been before awarded.) *Diploma.*

A. R. Moen, 222 Pearl-street, N. Y., for superior ivory handled table cutlery. *Silver Medal.*

Willis Thrall, Hartford, Conn., for specimens of rules. *Diploma.*

Horace M. Pool, Easton, Mass., for plumb and levels. *Diploma.*

William Field, Pawtucket, R. I., for superior plane irons. *Diploma.*

FANCY ARTICLES, EMBROIDERY, &c.

Peter R. Sprainger, 71 years of age, 21 Green-street, N. Y., for a quilt. *Diploma.*

Miss Louisa Eggert, 104 West-Broadway, N. Y., (blind lady,) for a quilt. *Diploma.*

Miss Emma Sarony, 16 Rose-street, N. Y., for the best worsted work on canvass. *Diploma.*

Mrs. Edwin C. Searles, Pomfret, Conn., for an embroidered table cover. *Diploma.*

Miss W. Blanc, 120 William-street, N. Y., for the best raised worsted work. *Diploma.*

Miss Mary E. Sturtevant, 238 Broome-street, N. Y., for the second best raised worsted work. *Diploma.*

Miss Helen Vought, 10 Fourteenth-street, N. Y., for the best fancy lamp mats. *Diploma.*

Misses Dixon, 388 Hudson-street, N. Y., for the best bead work. *Diploma.*

Mrs. Ludecus & Wiskemann, 549 Broadway, N. Y., for the best embroidery on velvet. *Diploma.*

Mrs. Antoinette Dunbar, 303 Mulberry-street, N. Y., for the second best embroidery on velvet. *Diploma.*

Mrs. M. Walley, 186 Laurens-street, N. Y., for the best shell work. *Diploma.*

Mrs. Seymour Whiting, Bridgeport, Conn., for the second best shell work. *Diploma.*

William B. T. Lane, 267 Greenwich-street, N. Y., for the best wax flowers. *Diploma.*

Miss Charlotte Baxter, Brooklyn, L. I., for the second best wax flowers. *Diploma.*

Mrs. M. L. Pettis, 405 Broadway, N. Y., for beautiful ribbon flowers. *Diploma.*

Miss Ann Rebecca Seymour, Flatbush, L. I., for a sampler. *Diploma.*

Miss Emeline M. Shephard, Northampton, Mass., for the best embroidery on cambric. *Diploma.*

Mrs. B. R. Voorhees, Amsterdam, N. Y., for the greatest variety of household manufactures. *Gold Medal.*

W. E. Hewlett, agent Seneca tribe of Indians, for beautiful specimens of table covers and mats, worked with beads upon broadcloth, by three squaws of that tribe, worthy of high commendation. *Silver Medal.*

Miss E. H. C. Kentish, 1 State-street, N. Y., for ingenious specimens of botanical paper cutting. *Diploma.*

Mrs. Elizabeth Rowan, 671 Broadway, N. Y., for the best ornamental hair work. *Diploma.*

Cornelius A. Walborn, Philad., for the best satin stocks. *Diploma.*

Miss L. A. Hanmer, Wethersfield, Conn., for a piece of domestic carpet. *Diploma.*

Mrs. Ludecus & Wiskemann, 549 Broadway, for the best knit lace, and ladies' knit caps. *Diploma.*

Miss E. Jane Smith, 100 Greene-street, for the second best worsted knitting. *Diploma.*

Mrs. W. A. Hamilton, 38 Pearl-street, for the second best knit lace. *Diploma.*

Mrs. Ann M. Downs, 154 Walker-street., for specimens of crimped milinery. *Diploma.*

Miss Wright, 182 Bowery, for the best corsets. *Diploma.*

Mrs. E. Morris, 143 Canal-street, for the second best corsets. *Diploma.*

Mrs. Gertrude Vultee, 114 Chatham-street, for the best made linen shirts. *Diploma.*

B. Waterbury, 189 Broadway, for the second best made linen shirts. *Diploma.*

Mrs. Elizabeth Rowan, 671 Broadway, for a basket of spice flowers. *Diploma.*

Mrs. Catharine Stagg, 199 Hudson-st., for the best specimen of millinery. *Diploma.*

Mrs. William Simmons, Broadway, for the second best specimen of millinery. *Diploma.*

Mrs. S. Wilen, Troy, N. Y , for the best silk embroidery. *Diploma.*

Miss Julia Marcet, 84 Orchard-st., for the second best silk embroidery. *Diploma.*

Henry Badt, Buffalo, N. Y., for a fancy toilet box. *Diploma.*

FINE ARTS.

Henry S. Sadd, N. Y., for the best mezzotinto engraving. *Diploma.*

Miss A. D. Vail, 499 Broadway, N. Y., for the bsst miniature. *Silver Medal.*

M. Frederick Butler, 6 Broad-st., N. Y , for the best architectural drawing, *Diploma.*

Paul R. Hodge, N. Y., for the best machine drawing. *Diploma.*

George Endicott, 22 John-st., N. Y., for the lithographic illustrations of the Natural History of the State of New York. *Gold Medal.*

W. H. Miller, 167 Broadway, N. Y., for the second best miniatures. *Diploma.*

Mrs. P. D. Dinsmore, 450 Broome-st., N. Y., for an excellent crayon drawing. *Diploma.*

James Ackerman, 22 John-st., N. Y., for a beautiful specimen of print coloring. *Diploma.*

Louis Baronto, 23 Orchard-st., N. Y., for beautiful alabaster figures and ornaments. *Silver Medal.*

Carse & West 472 Pearl-st., N. Y., for the best stained glass. (Silver Medal having been before awarded. *Diploma.*

James Murphy, Broadway, N. Y., for fine papier maché ceiling ornaments. *Diploma.*

FIRE ARMS.

Lucius Cutler, 105 Murray-st., for a rifle. *Diploma.*

Thomas Wiard, Avon, Livingston Co., N. Y., for a revolving chamber rifle of fine workmanship. *Silver Medal.*

J. G. Bolen, 104 Broadway, for the best self-cocking and revolving pistols. (Silver Medal having been before awarded.) *Diploma.*

Blunt & Syms, 45 Chatham-st., for fine workmanship on self-cocking and revolving pistols. *Diploma.*

Thomas Wiard, Avon, Livingston Co., N. Y., for a gun case on a new plan.

S. B. Amory, Goshen, N. Y., for superior gun locks on a double-barrelled fowling piece. *Diploma.*

CUT AND PLAIN GLASS.

Brooklyn Flint Glass Co., Brooklyn, L. I., Peter Morton, agent, 127 and 129 Water-st. N. Y., for the best plain and cut glass. *Silver Medal.*

Stouvenel & Brothers, 29 Gold-st., N. Y., for superior glass cutting. *Diploma.*

Williamstown Glass Works, Wm. Burger, agent, 40 and 52 Courtland-st., N. Y., for fine specimens of druggists glass ware. *Diploma.*

WINDOW GLASS.

Redford Crown Glass Co., Redford, N. Y., Charles Goff, sole agent, 164 Maiden Lane, for the best Crown Glass of very superior quality. (Silver Medal having been before awarded. (*Diploma.*

Saranac Crown Glass Co., for the second best crown glass. *Diploma.*

STRAW HATS.

William W. Simons, 209 Bowery, N. Y., for the best shaped and finished Dunstable and Florence hats. *Diploma.*

Bradford Frost, 212 Pearl-st., N. Y., for the shape and finish of a Tuscan hat. *Diploma.*

Samuel A. Blake, 175 Chrystie-street, N. Y., for the shape and finish of a Tuscan hat. *Diploma.*

Thomas Young, 96 Bowery, N. Y., for the best seven-braid straw hat. *Diploma.*

Thomas White, 22 High-st., Brooklyn, L. I., for the best eleven-braid straw hat. *Diploma.*

Mrs. Eliza Fitzgerald, 85 Chrystie-st., N. Y., for a worsted braid hat. *Diploma.*

S. D. Hall & Co. corner Cedar and Pearl-streets, N. Y., for superior Amazone bonnets. *Diploma.*

Miss Lucy M. Shaw, Berkshire, Tioga Co., N. Y., for two ladies' hats made from native grass of fine quality. *Diploma.*

FUR AND SILK HATS AND CAPS.

Francis Degen, 9 Gold-street, N. Y., for the best silk hats. *Diploma.*

Orlando Fish, 137 Broadway, N. Y., for the best fur hats. *Diploma.*

Mealio & Clark, Broadway and Canal-street, N. Y., for the second best fur and silk hats. *Diploma.*

Edward Mullen, 255 Bowery, N. Y., for military chapeaus. *Diploma.*

J. Fletcher, Williamsburgh, L. I., for military chapeaus. *Diploma.*

George W. Myer, 72 Broadway, N. Y., for the best cloth and fancy caps. *Diploma.*

William Brown, 126 Chatham-street, N. Y., for the second best cloth and fancy caps. *Diploma.*

William Banta, 94 Canal-street, N. Y., for fine hats and caps. *Diploma.*

E. F. Brigham, 126 Maiden-Lane, N. Y., for fine fancy caps. *Diploma.*

A. M. E. Ryder, 236 Water-street, N. Y., for superior fur caps. (Silver Medal having been before awarded.) *Diploma.*

HOUSEHOLD UTENSILS.

Thomas Harrison, 201 Mott-street, N. Y., for the best copper tea kettle. *Diploma.*

George Harrison, 201 Mott-street, N. Y.. for a miniature tea kettle. *Diploma.*

Samuel Rust, 128 Maiden-lane, N. Y., for superior lard or oil lamps, an improvement on those for which a Silver Medal has been awarded. *Diploma*

William Stoutenborough, 1 Burling slip, N. Y., for bird cages of excellent workmanship and fine finish. *Diploma.*

William Elfrey, 340 Grand-street, N. Y., for the best cooler tub. *Diploma.*

Samuel Hoop, 58 Attorney-street, N. Y., for the best pail. *Diploma.*

Jordan L. Mott, 564 Water-street, N. Y., for cast iron bathing tubs. (Silver Medal having been before awarded.) *Diploma.*

INDIA RUBBER GOODS.

J. S. Tomlinson, Newtown, Conn., H. G. Norton, agent, 75 Cedar-street, for the best India rubber cloth. *Silver Medal.*

Christopher Meyer, New-Brunswick, N. J., for the second best specimen of India rubber cloth. *Diploma.*

Christophor Meyer, New-Brunswick, N. J., for the best specimen of men's and women's over-shoes. *Diploma.*

S. C. Smith & Sons, 79 John-street, for the best India rubber hose. *Diploma.*

S. C. Smith & Sons, 79 John-street, for specimens of over-shoes. *Diploma.*

L. S. Waring, Providence, R. I., for sheet rubber shoes *Diploma.*

Horace H. Day, 45 Maiden-lane, for beautiful specimens of American McIntosh overcoats. *Diploma.*

John Haskins, Roxbury, Mass., for beautiful specimens of marble cloth. *Diploma.*

LAMPS AND CHANDELIERS.

Couthouy & Nevers, 341 Broadway, N. Y., for the best or molu, silvered and bronzed chandeliers, girandoles, solar lamps, and superior ship lamps. *Gold Medal.*

Cornelius & Co., Philadelphia, Pa., Woram & Haughwout, 561 Broadway, N. Y., agents, for the best glass girandoles, candelabras, and gas lamps. (Silver Medal having been before awarded.) *Diploma.*

N. Rogers, Auburn, N. Y., C. Kanouse, agent, Jersey City, N. J., for the best locomotive lamps. *Diploma.*

Wm. J. Hanington, 293 Broadway, N. Y., for stained glass hall lanterns. *Diploma.*

M. W. Emmons, 14 Spruce-st., N. Y., for a stained glass signal lantern. *Diploma.*

LEATHER.

Young & Shultz, 37 Ferry-st., N. Y., for the best sole leather. *Silver Medal.*

Prattsville Tannery, Greene Co., N. Y., Isaac K. Bailey, agent, 20 Ferry-st., N. Y., for the second best sole leather. *Diploma.*

William Kumbell, 33 Ferry-st., N Y., for the best specimen of waxed calf skins. (Silver Medal having been before awarded.) *Diploma.*

Peet & Paterson, Bridgeport, Conn., for the best top leather. *Diploma.*

M. S. Kerrigan, 1 Ferry-st., N. Y., for superior black morocco. *Diploma.*

Charles W. Trotter, 31 Ferry-st., N. Y., for superior bookbinder's colored calf skins. *Diploma.*

James R. Smith, 17 Jacob-st., N. Y., for superior cream and fancy colored skivers. (Silver Medal having been before awarded.) *Diploma.*

Wickliffe G. Broadwell, Newark, N. J., for superior kid leather, alum skivers, sheep and lamb skins. *Diploma.*

Samuel R. Burtis, 3 Ferry-st., N. Y., for superior skivers and chamois. *Diploma.*

LOCKS, DOOR-SPRINGS AND HINGES.

Stephen C. Bemis, Springfield, Mass., for superior locks and latches. Rodolphus Kingsley, Springfield, patentee. *Diploma.*

Rogers & Ray, Watervliet, N. Y., for fine wrought iron butt hinges. *Diploma.*

W. Woodward, Middletown, Conn., for a rotary gate spring. *Diploma.*

Lewis Lawrence, Waterford, N. Y., for the best door spring. *Diploma.*

Davenport, Quincy & Co., 81 John-st., N. Y., for the Union door springs. *Diploma.*

MACHINE-CUT WOOD TYPES AND ROLLERS.

George F. Nesbitt, Tontine Building, Wall-st., N. Y., for the best wood types cut by machinery. *Silver Medal.*

Joseph Russell, at Van Norden & Co.'s, 60 William-st, N. Y., for superior printer's composition rollers. *Diploma.*

MACHINERY, MODELS, &c.

Leonard Proctor, Fultonville, N. Y., for the best washing machine. *Diploma.*

James Young, Philadelphia, Pa., for the second best washing machine. *Diploma.*

W. & W. H. Lewis, 63½ Division-st., N. Y., for the best hat pressing machine. *Diploma.*

B. M. Johnson, 115 E. Broadway, for the second best hat pressing machine. *Diploma.*

James McCartney, 386 Stanton-st., N. Y., for the best model of a high pressure steam engine. *Diploma.*

Wm. Fletcher, 63, Beach-st., N. Y., for the second best model of a high pressure steam engine. *Diploma.*

Philip Mars, for a highly finished model of a vertical boat engine. *Diploma.*

Stillman & Co., Novelty Works, N. Y., for a horizontal high pressure steam engine. (Gold Medal having been before awarded.) *Diploma.*

James Smithson, 229 West-st., N. Y., for workmanship on a steam engine. *Diploma.*

Lewis Knapp, 59 Cedar-street, N. Y., for an atmospheric engine. *Diploma.*

John S. Weeden, Providence, R. I., for a model of a counterpoise bridge. *Silver Medal.*

William Read & Co., Philadelphia, for the best faucets. *Silver Medal.*

Horatio Kelsey, 46 Columbia-st., N. Y., for the second best faucets. *Diploma.*

Smith W. Bullock, 27 Peck Slip, N. Y., for the best model of a water-wheel. *Diploma.*

Joseph Durkee, Binghamton, N. Y., for the second best model of a water-wheel, *Diploma.*

Ira W. Shaler, Prattsville, Greene Co., N. Y., for a good bark mill. *Diploma.*

H. Vincent, 207 Houston-st., N. Y., for a well made hydraulic ram. *Diploma.*

Bruce Brothers, Jersey City, for a ship biscuit and cracker machine. (Gold and Silver medals having been before awarded.) *Diploma.*

Edward Downes, 41 Howard-st., N. Y., for the best lathe. *Diploma.*

George Nixon, 70½ Bowery, N. Y., for the second best lathe. *Diploma.*

John Horn, 15 Cannon-st., N. Y., for the best stocks and dies. *Diploma.*

Robert Gorsuch, 372 Fifth-st., N. Y., for a well made model of a good machine for making lead pipe. *Silver Medal.*

M. N. Armstrong, Williamsburgh, L. I., for a knife cleaning machine, a very useful article. (Diploma awarded last year.) *Silver Medal.*

Brown & Fernhead, 83 Fulton-st., N. Y., for the best specimens of counter scales. *Diploma.*

D. G. Donald, 680 Water-st., for the second best counter scales. *Diploma.*

Henry Nelson, 240 Third Avenue, for superior horse shoes and hammers. *Diploma.*

W. R. & A. Inslee, Newark, N. J., for a tinner's press for ornamental work. *Diploma.*

A. L. Johnson, Baltimore, Md., for a revolving fire proof iron window shutter. (Safe and convenient.) *Silver Medal.*

Thomas Cooper, Hempstead, L. I., for a model of an anthracite puddling furnace, highly useful and economical. *Gold Medal.*

Augustus Thayer, Chatham, N. Y., for the best workmanship on pumps. *Diploma.*

Philo C. Curtis, Hartford, Conn., for the second best workmanship on pumps. *Diploma.*

Ezra S. Williams, Conn., for good rotary house pumps. *Diploma.*

Sabin Lewis, 106 William-st., N. Y., for the best wrenches. *Diploma.*

H. W. Miller, Worcester, Mass., for the second best wrenches. *Diploma.*

Franklin Ransom, 247 Water st., N. Y., for an ingenious hydraulic machine. *Diploma.*

Shuler C. Higbe, Fulton Co., N. Y., for a well made engine pump and hydrant cock. *Diploma.*

Chauncey Andrews, Paterson, N. J., for an elevating water-wheel, (a good arrangement. *Silver Medal.*

Chauncey Andrew, Paterson, N. J., for the best bobbins. (Silver Medal having been before awarded.) *Diploma.*

Carver & Pine, Matteawan, N. Y., for the second best bobbins. *Diploma.*

Matteawan, N. Y., for a differential press of great power. *Silver Medal.*

Chatfield H. Smith, Sixth-st., and Bowery, N. Y., for a safety stop cock for locomotives. *Silver Medal.*

William Robinson, 174 Fulton st., N. Y., for wood and iron hydrants *Diploma.*

Smith W. Bullock, 27 Peck Slip, N. Y., for the best cotton or hay press for common use. *Silver medal.*

Levi Dedrieck, Cleveland; N. Y., for the second best hay press. *Diploma.*

Rogers, Ketcham & Grosvernor, Paterson, N. J., for a throstle frame, an excellent machine with improvements, *Silver Medal.*

J. Bauder, Bridgeport, Conn., for the best of portable grain mills, (Platt's patent.) *Silver Medal.*

Prentice & Page, 40 Eldridge-street, N. Y., for a superior portable grain mill. (Silver medal having been before awarded.) *Diploma.*

Samuel Fairlamb, 44 Forsyth-street, N. Y., for a good fringe loom. *Diploma.*

Nicholas Morgan, 52 Cliff-street, N. Y., for a tenoning machine. *Silver Medal.*

Peck, Smith & Co., Southington, Conn., for superior tinners, machines. *Diploma.*

Solomon Stow, Southington, Conn., for superior tinners' machines. *Diploma.*

Isaac Crossett, Bennington, Vt., for a complete set of machinery for making barrels. *Silver Medal.*

Jacob Groat, Troy, N. Y., for a machine for hulling rice. *Silver Medal.*

F. E. Sickels, 349 Greenwich-street, N. Y., for an exhaust cam and lever, an ingenious contrivance. *Diploma.*

Pearson Crosby, Fredonia, Chautauque Co., N. Y., for a cheap and useful portable saw-mill. *Silver Medal.*

E. & T. Fairbanks, St. Johnsburgh, Vt., for the best platform scales. (Silver medal having been before awarded.) *Diploma.*

Bull & Wade, 172 Elm-street, N. Y., for excellent platform scales. *Diploma.*

D. H. Southworth, 106 Avenue D., N. Y., for superior smut machines. (Gold medal having been before awarded. *Diploma.*

Eli P. Drake, Troy, N. Y., for a machine for crimping boots. *Silver Medal.*

James Bogardus, 46 East Broadway, N. Y., for eccentric iron disc mills for grinding (Gold medal having been before awarded.) *Diploma.*

Wiilliam Bigelow, Hartford, Conn., for a dynamometer *Diploma.*

Thomas E. Daniels, Worcester, Mass., for a wood planing machine, (good and useful.) (Silver medal having been before awarded.) *Diploma.*

Andrew Menetry, Troy, N. Y., for a church bell of excellent tone and workmanship. *Silver Medal.*

Lewis S. Dod, 315 Stanton-street, N. Y., for a ship's bell, with an improvement in the hanging. *Diploma.*

David L. Seymour, Peekskill, N. Y., for a portable forge and bellows. *Diploma.*

James Young, Philadelphia, Pa., for a railroad switch, (Self-acting and good.) *Diploma.*

James Maxwell, 259 Bowery, N. Y., for a good bookbinder's lacking press. *Diploma.*

Matteawan Machine Works, Matteawan, N. Y., for parts of cotton machinery of excellent workmanship. *Diploma.*

R. B. Ruggles, 60 Gold-street, N Y., for a sole riveting machine, well adapted to the work. *Silver Medal.*

Hiram Parker, corner Fifteenth-street and Sixth Avenue, N. Y., for the best spoke dressing machine. *Diploma.*

E. H. Pennoyer, Harlem, N. Y., for a spoke dressing machine. *Diploma.*

T. J. Dyre & Co., Philadelphia, Pa., for black lead melting pots of excellent quality. *Diploma.*

James Maxwell, 259 Bowery, N. Y., for a bookbinders' cutting press. *Diploma.*

Thomas Prosser, Paterson, N. J., for good welded iron tubes. *Diploma.*

S. Wood, Worcester, Mass., for an ingenious and well made machine for shaving shingles. *Silver Medal.*

James Stone, 490 Broadway, for a proving machine for Croton stop cocks. *Diploma.*

Elisha Tolles, for a self-fastening door, very useful for post-offices. *Diploma.*

Aaron Palmer, Brockport, N. Y., for an endless self-computing scale. *Diploma.*

J. Wetmore, for a molasses gate. *Diploma.*

Reuben Shaler, Haddam, Conn., for a scouring machine. *Diploma.*

George Farnham, for Lombard's snow plough for railroads, an important improvement. *Silver Medal.*

Peter Cooper, Thirty-third-street, for rivet iron, a very excellent article. (Gold Medal having been before awarded.) *Diploma.*

W. T. Williamson, 4 Little Green-street, for iron coffee and corn mills, well made and useful. *Diploma.*

John Frazer, 156 Delancy-street, for a notarial seal press, ingenious, useful and cheap. *Diploma.*

William Johnson, 181 Bleecker.street, for the best soda water draught tube. *Diploma.*

Charles Lewis, 108 Reade-street, for the second best soda water draught tube. *Diploma.*

Augustas McKinnon, 81 Crosby-street, for a well executed screw for a dividing engine. *Diploma.*

George Ewing, 438 Broome-street, for a button machine. *Diploma.*

H. S. Berry, Westerly, R. I., for the best self-acting weavers temples. *Diploma.*

John S. Worth, 84 McDougal-street, for the second best self-acting rotary temples. *Diploma.*

J. R. Earle & Co., Worcester, Mass., Charles Schenck, agent, 132 Wrter-street, N. Y., for excellent machine cards. *Silver Medal.*

William S. Humphrey & Co., Providence, R. I. for the best weavers reeds. *Silver Medal.*

Charles Schenck, 132 Water-street, for the second best weavers reeds. *Diploma.*

E. G. Triipp, & Co., Trenton, N. J., Charles Schenck, agent, 132 Water-street, for excellent weavers shuttles. *Diploma.*

A. Lamont, Alleghany city, Pa., for the best wrought iron vices. *Silver Medal.*

Benjamin Beecher, 7 Wall-street, for the best cast iron vices. *Diploma.*

A. & G. W. Brady, 72 Charles-street, for specimens of vices. *Diploma.*

Jesse Ketchum, 1 Broad-street, for the best small printing press. *Diploma.*

Lebbens B. Ward, N. Y., for a wrought iron cannon, weighing 27,390 lbs. (Gold Medal having been awarded last year for a steam-boat shaft, of less magnitude.) *Diploma.*

Oliver Ames, Falls Village, Conn., for superior flange tire iron for locomotives. *Silver Medal.*

S. H. Davies, N. Y., for a superior fire plug. *Diploma.*

Elisha Tolles, N. Y., for a concave rail-road safety fendr, well adapted to prevent accidents from snakes heads. *Diploma.*

James Hamilton, 157 Crosby-street, N. Y., for a steam saw-mill for cutting curved lines and bevelling timber at the same time. *Gold Medal.*

Ethan Cambell, N. Y., for a self-feeding apparatus for supplying steam boilers with water or other fluids. *Gold Medal.*

James Wood & Son, Philadelphia, Pa., for very superior superior imitation of Rusia sheet-iron. *Diploma.*

MATHEMATICAL AND PHILOSOPHICAL INSTRUMENTS.

James Prentice, 183 Broadway, N. Y., for the best mathematical instruments, *Silver Medal.*

Addington D. Frye, 222 Water st., N. Y., for a reflecting telescope, a well constructed instrument—well adapted for schools. *Silver Medal.*

Addington D. Frye, 222 Water st., N. Y., for a lactometer, a useful and important instrument. *Diploma.*

James Rodgers, 410½ Broadway, N. Y., for a manometer. *Diploma.*

Frye & Shaw, 222 Water st., N. Y., for sextants, quadrants, &c. (Silver medal having been before awarded.) *Diploma.*

George Tagliabue, 269 Water st., N. Y., or barometers thermometers, &c. (Gold medal having been before awarded.) *Diploma.*

NAVAL ARCHITECTURE.

James D. Grice, Brooklyn, L. I., for a model of a 24 gun corvette. *Diploma.*

Matteawan Machine Co., Matteawan, N. Y., for the best capstan. *Silver Medal.*

John Cochran, 94 Wall st., N. Y., for the best steering wheel. *Silver Medal.*

Francis Grice, Brooklyn, L. I., for a drawing of a dry dock. *Diploma.*

Frye & Shaw, 222 Water st., N. Y., for a ship's binnacle. (Silver Medal having been before awarded.) *Diploma.*

Smith W. Bullock, 27 Peck Slip, N. Y., for a ship car and dry dock. *Diploma.*

A diploma is awarded to the splendid steamboat Knickerbocker.

PAPER, BOOKS, STATIONARY, AND PRINTING.

Hudson & Co., Hartford, Conn., for the best writing and bank note paper. (Silver Medal having been before awarded. *Diploma.*

Emanuel Henriques, Woodbridge, Conn., for the second best writing paper. *Diploma.*

S. P. Ruggles, Boston, Mass., for superior embossed printing for the use of the blind. *Diploma.*

C. C. Wright & Co., 167 Broadway, N. Y., for the best steel pens. (Silver Medal having been before awarded.) *Diploma.*

Josiah Hayden & Co., Haydenville, Mass., for excellent steel pens, Wood & Folger, 219 Pearl st., agents. *Diploma.*

Levi Brown, Brooklyn, L. I., for the best gold pens. (Silver medal having been before awarded.) *Diploma.*

Russel C. Root, 152 Pearl-st., N. Y., for the best bank ledgers. *Diploma.*

Lewis Francis, 76 Maiden Lane, N. Y., for the best account books. *Diploma.*

Richard B. Burnton, 436 Bleecker-st., N. Y., for the best paper ruling. *Diploma.*

James Clark, Hanover, N. J., for the best tissue paper. *Silver Medal.*

George R. Cholwell, 79 William-st., N. Y., for beautiful pocket-books, card and needlecases. *Diploma.*

John Smyth & Son, 351 Front st., N. Y., for fine specimens of parchment. *Diploma.*

Patrick Hogan, 74 Maiden Lane, N. Y., for highly finished ruling pens. *Diploma.*

SIGN PAINTINGS AND IMITATIONS.

Ackerman & Miller, 101 Nassau-street, N. Y., for the best sign painting. *Diploma.*

T. Ford, Greenpoint, L. I., for the best writing on Glass. *Diploma.*

Benjamin Blonk, corner Thirteenth st. and Broadway, N. Y., for the best graining. *Diploma.*

Henry Nowlan, 107 Murray st., N. Y, for the best imitation of marble. *Diploma.*

Penmanship.

W. Dunlop, New-Orleans, for a very elaborate and beautiful specimen of writing and drawing with the pen. *Diploma.*

Oliver B. Goldsmith, 189 Broadway, N. Y., for beautiful specimens of penmanship. *Diploma.*

Hiram Dixon, 141 Cedar-street, for beautiful specimens of Penmanship. *Diploma.*

Wm. Davison, 64 Troy-st., N. Y., for specimens of penmanship. *Diploma.*

Perfumery.

Eugene Rousel, Philadelphia, Pa., for the best soaps, shaving cream, and perfumery. *Silver Medal.*

John Lindmark, 88 Chatham-street, N. Y., for the best cologne water. (Silver Medal having been before awarded.) *Diploma.*

Edward Phalon, 214 Broadway, N. Y., for the second best shaving cream. *Diploma.*

Thomas E. March, 177 Sixteenth-street, N. Y., for a specimen of lavender water. *Diploma.*

Piano-Fortes, Organs and Musical Instruments.

Thomas Loud, Philadelphia, Pa., for the best piano-forte, (with improvements.) (Gold Medal having been before awarded.) *Diploma.*

John Walker, 411 Broadway, N. Y., for the second best piano-forte. *Diploma.*

V. F. Harrison, 33 Canal-street, N. Y., for a piano-forte. *Diploma.*

George Jardine, 83 Anthony-street, N. Y., for a full toned organ. (Silver Medal having been before awarded.) *Diploma.*

James and Samuel Jackson, 170 Sixth avenue, for an organ. (The improvement in the moveable mechanism attached to the key board, and its adaptation to be played either with the fingers or a crank.) *Diploma.*

Allen R. Jollie, 385 Broadway, N. Y., for the best flute. *Diploma.*

Hugh Cottier, 65 Mulberry-street, N. Y., for the second best flute. *Diploma.*

Woodbury & Burdett, Brattleboro', Vt., for the best violins. *Silver Medal.*

Firth & Hall, 1 Franklin-square, N. Y., for the best guitar. *Diploma.*

Firth & Hall, 1 Franklin-square, N. Y., for the best valve trombone and bugle. *Diploma.*

PREPARATIONS OF NATURAL HISTORY.

J. G. Bell, 293 Broadway, N. Y., for the best stuffed birds. (Silver Medal having been before awarded.) *Diploma.*

Joseph F. Talson, Jersey City, N. J., for the best minerals, (from Bergen Hill, N. J.) *Diploma.*

Grant H. Adams, 169 William-street, N. Y., for superior hones from Arkansas. *Diploma.*

Jordan M. Mott, 10 White-street, N. Y., for the best preserved insects. *Diploma.*

Joseph N. Barnes, 33 Canal-street, N. Y., for a Verde antique chimney piece. *Diploma.*

PINS AND NEEDLES.

Howe Manufacturing Co., Birmingham, Conn , Edward Cook, N. Y., agent, for superior solid headed pins. (Gold Medal having been before awarded.) *Diploma,*

J. Barlow & Co., Haverstraw, N. Y., for specimens of needles. *Diploma.*

PYROTECHNY.

Isaac Edge, jr. Jersey City, N. J., for the best display of fireworks. *Silver Cup.*

SADDLERY.

Robert Spencer, 193 Canal-street, N. Y., for good saddle trees and saddles. *Diploma.*

H. J. Storms & Co., 34 Fulton-street, N. Y., for a military saddle, &c. *Diploma.*

SILKS—RAW AND MANUFACTURED.

W. J. Cantelo, Weehawken, N. J., for the best cocoons and raw silks. *Gold Medal.*

Albert P. Heartt, Troy, N. Y., for the second best cocoons. *Diploma.*

Lucius Carey, Moreau, Saratoga Co., N. Y., for the second best raw silk. *Silver Medal.*

Northampton Association of Education and Industry, for specimens of raw silk. *Diploma.*

Luke A. White, 15 Whitehall-street, N. Y., for a specimen of raw silk. *Diploma.*

F. Trowbridge, Flushing, N. Y., for a specimen of raw silk. *Diploma.*

Ephraim Montague, Belchertown, Mass., for a specimen of raw silk. *Diploma.*

W. J. Cantelo, Weehawken, N. J., for winding racks for cocoons, a very useful article. *Diploma.*

William Haydon, Ninth Avenue and Twenty-seventh-street, N. Y., for superior silk dyeing. *Diploma.*

New England Silk Co., Hartford, Conn., for the best black and colored sewing silk. *Silver Medal.*

Northampton Association of Education and Industry, for the second best sewing silk. *Diploma.*

Haskell & Hayden, Windsor, Conn., for superior colored spool sewing silk. (Gold Medal having been before awarded.) *Diploma.*

John W. Gill, Mount-Pleasant, Ohio, for the greatest variety of manufactured silk goods. *Gold Medal.*

Timothy Smith, Amherst, Mass., for a piece of plain drab silk. *Silver Medal.*

Murray & Ryle, Paterson, N. J., for ladies' and gent's cravats and twilled silk handkerchiefs. *Gold Medal.*

John Denmead, 137 William-street, N. Y., for silk gimps, silk wire, and coat binding. *Silver Medal.*

Mrs. Mary Beach, Newark, N. J., for a pair of white silk hose. *Diploma.*

SILVER WARE.

Albert Coles, 6 Little Greene-street, N. Y., for silver butter knives. (Silver Medal having been before awarded.) *Diploma.*

STOVES, GRATES, AND RANGES.

Shephard & Co., 242 Water-street, N. Y., for the best stoves for churches, stores, halls, &c. (Gold Medal having been before awarded. *Diploma.*

Jordan L. Mott, 264 Water-street, N. Y., for the best stoves for parlors, basements, and offices. (Silver Medal having been before awarded.) *Diploma.*

J. & E. Backus, 56 Bowery, N. Y., for the best sheet iron octagon stove. *Diploma.*

Jordan L. Mott, 264 Water-street, N. Y., for the best winter stove for culinary purposes, (tabular oven stove.) (Silver Medal having been before awarded.) *Diploma.*

Thompson & Munsell, 246 Water-street, N. Y., for the best summer stove for culinary purposes. *Silver Medal.*

James Wilson, 208 Front-street, N. Y., for a portable range. *Diploma.*

Peter Mills, Binghamton, Broome Co., N. Y., for a cooking stove. *Diploma.*

W. & N. Jackson, 238 Front-street, N. Y., for the best parlor grates. *Diploma.*

John Savery & Son, 113 Beekman-street, N. Y., for the second best parlor grates. *Diploma.*

Whitehead & Law, corner Elm and Centre-streets, N. Y., for parlor grates. *Diploma.*

Samuel Pierce, 111 Fulton-street, N. Y., for the best kitchen range. (Gold Medal having been before awarded.) *Diploma.*

Henry Lawrence, 118 Fourth-street, N. Y., for the second best cooking range. *Diploma.*

SURGICAL INSTRUMENTS.

Livingston Roe, White Plains, N. Y., for the best fracture apparatus. *Diploma.*

N. S. Raymond, Utica, N. Y., for the second best fracture apparatus. *Diploma.*

Wm. Selpho, 80 Spring-st., N. Y., for an Anglesy leg with an improvement. (Silver Medal having been before awarded.) *Diploma.*

Louis Zwahlen, 29 Spruce-st. N. Y., for a rectum pump, with a flexible metallic tube. *Diploma.*

Hull's Truss Co., 4 Vesey-st., N. Y., for the best trusses and abdominal supporters. (Gold Medal having been before awarded.) *Diploma.*

Edward W. Sherman, 63 Chambers-st, N. Y., for excellent trusses and supporters. *Diploma.*

W. S. Jacks, Catskill, N. Y., for an instrument for raising the toe in cases of defect in the tendons of the instep. *Diploma.*

Williams Woolley, 141 Mulberry-st., N. Y., for a surgical bedstead, an excellent article. *Silver Medal.*

Mrs. M. H. Piercy, 121 Spring-st., N. Y., for a laced stocking and spiral corsets, (good articles.) *Diploma.*

UPHOLSTERY.

W. & G. Curtis, 52 Maiden Lane, N. Y., for a satin damask window curtain. *Diploma.*

John A. Miller & Co., N. Y., for superior curled hair. *Diploma.*

WIGS, TOUPEES, AND SHELL COMBS.

Thomas Bogue, Philadelphia, Pa., for the best gentlemen's gossamer wigs. *Diploma.*

A. Gilbert, 565 Broadway, N. Y., for the best ladies' gossamer ventilating wigs. *Diploma.*

Daniel Hervill, 44 Fulton-st., N. Y., for superior shell combs. *Diploma.*

WOOD AND IVORY TURNING.

John Phyfe, 19 Murray-st., N. Y., for superior specimens of ivory and wood turning, extensive variety and beauty of finish. *Silver Medal.*

Orlan Greenwood, Perkinsville, Vt., for door knobs made of white birch. *Diploma.*

George M. Dennison, Deep River, Conn., for specimens of turned tool handles. *Diploma.*

WOOLLEN GOODS.

Middlesex Manufacturing Company, Lowell, Mass., Lambert & Wolcott, agents, 63 Pine-st., N. Y., for the best broadcloths and cassimeres. *Gold Medal.*

Middlesex Manufacturing Company, Lowell, Mass., Lambert &

Wolcott, agents, 63 Pine-st., N. Y., for superior fancy figured overcoating. *Diploma.*

William B. Hotchkiss & Co., Woodbury, Conn., Fearings & Hall, agents, 55 Exchange Place, N. Y., for very superior satinetts, in quality and finish. *Gold Medal.*

Duncan & Cunningham, Belleville, N. J., for superior piano covers, table covers, embroidered shawls, and horse blankets. *Silver Medal.*

Shaker Community, Merrimack Co., N. H , George W. Gorum, agent, 126 Maiden Lane, N. Y., for specimens of flannel shirts, drawers, half hose and gloves. *Diploma.*

A. & W. Morrison, 573 Broadway, N. Y., for the best woollen yarn. *Diploma.*

Messrs. J. Wheelock & Sons, Uxbridge, Mass., for the second best woollen yarn. *Diploma.*

Union Manufacturing Company, Norwalk, Conn , for superior felt cloth. (Gold Medal having been before awarded.) *Diploma.*

MISCELLANEOUS.

Edwards & Holman, Boston, Mass., for the best salamander safes. *Silver Medal.*

William Delmeno, 468 Broadway, N. Y., for specimens of perforated zinc. *Diploma.*

John Conroy, 52 Fulton-street, N. Y., for superior fishing tackle. *Diploma.*

John R. Watson, Perth Amboy, N. J., for superior fire brick. *Silver Medal.*

Mrs. Ann Pierce, 2 Park Place, N. Y., for a house made of shells. *Diploma.*

Edward Stetson, New Bedford, Mass., for a bell telegraph. *Diploma.*

Lee & Company, 18 Factory-street, N. Y., for superior wire window shades. *Diploma.*

William H. Rodgers, 410½ Broadway, N. Y., for a superior silver fishing reel. *Diploma.*

Joel F. Keeler, Cazenovia, N. Y., for superior lard oil. *Diploma.*

Harlem Manufacturing Co., Harlem, N. Y., for superior picked oakum. *Diploma.*

Lewis Katen, 79 Canal-street, N. Y., for an enamelled sign. *Diploma.*

William Stoutenborough, 1 Burling Slip, N. Y., for superior wire cloth. *Diploma.*

J. F. Chapin, 120 Clinton-street, N. Y., for a ship's harness cask. *Diploma.*

Oliver Halsted, 26 John-street, N. Y., for an exercising chair for invalids. *Diploma.*

George Morgan, cor. Avenue C and Twelfth-street, N. Y., for superior hat and cloak hooks. *Diploma.*

John Allayola, 106 Bowery, N. Y., for home-bred leeches. (Silver Medal having been before awarded. *Diploma.*

John Hinde & Co., Germantown, Pa., A. Chalmers, agent, 73 Maiden Lane, N. Y., for superior shoe thread. *Diploma.*

L. C. Ives & Co., Bristol, Conn., for superior gold and silver plated combs. *Diploma.*

B. Delapierre, 118 Grand-street, N. Y., for superior military ornaments. (Silver Medal having been before awarded.) *Diploma.*

Thomas Wyatt, 76 Liberty-street, N. Y., for electrotype medals. *Diploma.*

Thomas Prosser, Paterson, N. J., for superior porcelain buttons. *Diploma.*

G. W. Larrabee, Providence, R. I., for superior silver plated hooks and eyes. *Diploma.*

S. A. Hebard, John-street, N. Y., for superior staining blocks for calico printers. *Diploma.*

John Finn, 295 Grand-street, N. Y., for the best umbrellas. *Diploma.*

Thomas Wyatt, 110 Fulton-street, N. Y., for second best umbrellas. *Diploma.*

Charles De' L. Montainye, 43 Cedar-street, N. Y., for a superior parasol. *Diploma.*

John S. Caulkins, 49 Maiden Lane, N. Y., for superior walking canes. *Diploma.*

E. E. Pritchard, Waterbury, Conn., for superior silk buttons. *Diploma.*

J. W. Kelly, 81 Fulton-street, N. Y., for medicated candies. *Diploma.*

John Anderson & Co., 2 Wall-street, N. Y., for the best tobacco and snuff. *Diploma.*

Reuben C. Bull, 11 Park Row, N. Y., for the best ornamental frames. *Diploma.*

Clover & Brown, 83 Anthony-street, N. Y., for an excellent picture frame. *Diploma.*

R. F. Hibbard, 96 John-street, N. Y., for superior baskets and seives. *Diploma.*

Misses Margaret A., Sarah A., and Selina A. Jacques, N. Y., for superior geometrical diagrams. *Diploma.*

Michael Connolly, 143 Mercer-street, N. Y., for superior cigars. *Diploma.*

Henry D. Hudson, Newark, N. J., for the best mustard. *Diploma.*

Thomas Young, Bowery, N. Y., for superior bleached horse hair. *Diploma.*

W. B. Humbert, 220 Bowery, N. Y., for the best bread. *Diploma.*

(D.)

COMMUNICATIONS FROM CONTRIBUTORS.

Fruit Farm of R. L. Pell,
Pelham, Ulster Co., N. Y.

To the Committee on Fruit Farms:

Gentlemen—Being desirous to compete for the premium to be awarded by the American Institute, at its 16th Annual Fair, for the best fruit farm in the State, I now abide by its rules, and offer, at the request of Mr. T. B. Wakeman, its worthy and very useful secretary, my mode of cultivating the different fruits named in the annexed catalogue.

1st. On the Apppe Tree. For some years I have been experimenting upon the apple tree. Having an orchard of 20,000 bearing Newtown pippin apple trees, I have found it very unprofitable to wait for what is termed the bearing year, and consequently it has been my study to assist nature, so as to enable the trees to bear every year. I have noticed that it bears more profusely than any other tree, and consequently requires the intermediate year to recover itself, by extracting from the atmosphere and earth the requisites to enable it to produce. One year is too short a time for so elaborate a process, and if unassisted by art, the intervening year must necessarily be lost. If, however, it is supplied with the proper substances, it will bear every year; at least such has been the result of the following experiment: Three years ago in April, I scraped all the rough bark off from several thousand trees in my orchard, and washed the trunks and limbs within reach with soft-soap, trimmed out all the branches that crossed each other, early in June, and painted the wounded part with white lead, to keep out moisture, then split open the bark by running a sharp-pointed knife from the ground to the first set of limbs, in the latter part of the same month, which prevents the tree from becoming bark-bound, and gives the inner wood an opportunity of expanding. In July, I placed one peck of oyster shell lime around each tree, and left it piled about the trunk until Nov., during which three months the drought was excessive. In Nov. the lime was dug in thoroughly. The following year (1842,) I collected from those trees, 1,700 barrels of fruit, some of which was sold in New-York for $4 per barrel, and others in London for $9. The cider made from the refuse, delivered at the mill two days after its manufacture, I sold for $3.75 per barrel of thirty-two gallons, not including the barrel. In making cider, I never wet the straw. After gathering the fruit in October, I manured the same trees with stable manure, having secured to it the ammonia, and covered it immediately with earth. Strange as it may appear, this year they are literally bending to the ground with the finest fruit I ever saw, a specimen of which is before you. The other trees in my orchard, not treated as above, are barren, next year being their bearing year. I am now placing around each tree one peck of charcoal dust, and propose in the spring to cover it from the compost heaps. I have grown corn, beets and carrots in pure charcoal this season; likewise, cuttings of the rose bush, camelia japonica, grape vine and wax plant, and believe it to be one of the most valuable manures we have. Once placed upon the soil, it is there forever.

2d. Pear Trees.—I treat my pear trees pretty much the same as the apple. I find it has but few enemies, viz: the mouse, curculio, slug worm and fire-blight, as it is termed. The curculio is a winged beetle which rises from the earth when the young fruit is forming, and climbs up the tree to deposite its egg in the fruit. Whale oil soap placed around the tree will prevent its climbing; if it should succeed in reaching the fruit by means of its wings, syringe the tree with tobacco water. Place lime and charcoal around the root, and it will not be molested by the mouse. As for fire-blight, caused as some suppose by a stroke of the sun, I am convinced it is nothing more or less than an insect known by the name of scolytus pyri, a very small worm, which may be found upon examination in the abburnum of any pear tree, the top of which presents a black and withered appearance during June and July, The branches so affected should be immediately cut off. In pruning I take off only such limbs as cross each other, and balance the tree by keeping the head open to the sun.

3d. Peach Trees. In planting peach trees, I dig my holes two and a half feet deep and three feet in diameter; then place lime, charcoal, ashes, salt and well rotted barn-yard manure in the bottom, which is thoroughly incorporated with the soil first removed; the tree is placed in the centre, and the top soil mixed with poudrette thrown on the roots, previously spread fan-shape to receive it. During the operation of filling up the hole, the tree is constantly gently shaken and occasionally watered with soot water.

I am fully convinced that the disease called the *yellows*, is caused by a worm at the root, produced from an egg deposited by a fly in the fruit. When the egg of the fly comes to maturity in the fruit, it falls; the worm then enters the tree near the ground, which is the most vulnerable part, and at once commences its work of destruction by eating the sap wood. To prevent this, the tree must be inoculated at the age of one year, (instead of two years, the common practice,) and limed; surrounded by charcoal dust at the age of two years, and when it comes into bearing, place around the trunk, near the ground, a piece of flannel well saturated with whale oil soap, which will prevent ants and other creeping insects from climbing the tree. I never prune peach trees.

4th. Plums.—Fourteen years since, I removed eighty plum trees from the lower part of my farm, in the month of May, and set them in rich sandy loam land, which is the best soil for them. They were valuable varieties, such as blue gage, yellow egg, magnum bonum, &c., and had borne profusely four years before they were taken up. For the space of thirteen years after their removal they never bore a single plum, although they grew luxuriantly. In the fall of 1842, I placed half a bushel of shell lime around each tree, and last March, half a bushel of pulverized charcoal; in May, they were covered with blossoms, and bore a profusion of fruit. When large black excrescences appear on the plum trees, I cut off the limbs affected and burn them. They are caused by a worm.

5th. CHERRIES. I usually sow the stones of the cherry tree in the month of November, in a well trenched rich soil. The second year they are placed in the nursery, four feet asunder, and eleven inches apart in the row, where they remain for six months, and are then inoculated. The gum of the cherry tree may be placed on a par with gum arabic.

6th. APRICOTS. This fruit does exceedingly well when budded towards the end of July, on plum stocks two years old. The peach answers very well likewise. When three years old, I set them out in a very rich black mould; I find they do much better under glass than in the open air. In either case they should be disbudded in the month of May, and all the superfluous shoots taken off. In November they should be shortened to sixteen inches, by so doing the trees will be kept vigorous and healthy. Their principal enemies are the curculios, wasps and flies, which may be kept off by means of nets.

7th. NECTARINE. The only difference between this fruit and the peach, is that it has a finer pulp and smoother skin. I treat it precisely as I do the peach, and consider it much more delicious and wholesome. The nectar of the heathen gods is supposed to have been obtained from it. They are frequently budded on the plum and peach stock, and are liable to the attacks of the curculios and wasps. I am growing peaches, plums, cherries, apricots, nectarines, grapes and figs under glass very successfully, without fire heat. My fig trees have borne two crops the present season.

8th. GOOSEBERRIES. I raise my gooseberries from cuttings, which are taken from the bush in the month of November, placed in a box from six to eight inches deep, in a rich soil, and put in the conservatory, where they remain until March, when they are set out in rich borders around the garden; and every year the leading shoots of the previous year are cut back to eight inches, and a portion of the others are cut to four inches, until every portion of the plant is filled with bearing wood. The most effectual remedy for the destruction of the caterpillars which trouble the gooseberry, is the spirit of ammonia.

9th. CURRANTS. I usually prune my currant bushes in the month of December, and likewise in the month of June, which causes them to throw out strong shoots, and thrifty bearing wood, diverging in every direction from the stem. They are easily raised from cuttings planted late in March, they do well in a moist rich soil.

10th. RASPBERRIES. Should be planted in hills, five young plants in each, eight inches apart, and cut at the same time to within six inches of the ground. In the fall all the wood that has produced fruit in the summer must be cut out, and the remaining shoots shortened. At the end of five years the plantation must be destroyed and replaced by a new one.

11th. Strawberries. In the month of September I take up the young runners that have formed roots, and set them out in rows fourteen inches apart, in the bed where they are to remain, instead of transplanting them in nursery beds. The ground is previously prepared by trenching to the depth of three feet, and highly enriched. The tops are top-dressed with lime, ashes and charcoal dust.

12th. Grapes. On the 8th of March, 1842, I set one hundred single eyes, of the black Hamburgh, muscat of Alexandria, Saint Peter, and various other choice varieties of grapes, in thumb pots, and placed them in a hot bed under double glass. They grew two feet before the 8th of May, when they were removed to larger pots, and put in a new hot bed in the open air under single glass. On the 8th of July they averaged four feet, on the 1st of November, six feet; when they were planted out in the grapery, three feet apart, in a trench which was opened six feet wide, to the depth of three feet six inches, and filled with prepared earth. The young vines were immediately cut to a single eye, and during the past summer have grown from twenty to twenty-four feet; the breadth of the leaves varies from six to ten inches. I do not allow my vines to produce fruit until the stems will measure two and a half inches in circumference at the ground. I much prefer the long pruning, as it is the most simple and rids the cultivator of the old wood every year. If vines are pruned in April or May, they will bleed excessively. The 20th of February is in my opinion the proper time. I have a native vine in my garden, at the root of which a pig was buried last fall, last March it was cut to a single eye, and during the summer it has grown thirty-two feet.

ROBERT L. PELL.

Pelham, Ulster Co., N. Y. Oct. 8th 1843

List of Fruit trees on the Pelham Farm.

APPLES.

20,000 green and yellow Newtown pippins, 18 years old.
Esopus spitzenburgh,
Rhode Island greening,
Large yellow bow,
Golden pippin,
Fall pippin,
Swan apple,
Gilliflower,
Seek no further,
Pearmain,
Pound sweeting,
Golden russet,
Dowaton pippin,
English golden pippin.
Jersey sweet,
Juneating,
Golden reinette,
Jonathan,
Maiden's blush,
Munster,
Ross nonpareil,
Summer sweet paradise,
Sugar loaf pippin,
Kenrick's autumn,
King of pippins,
Lady apple,

Monstrous pippin,
Yellow bellflower,
Summer queen,
Michael Henry pippin,
Holland pippin,
Beauty of Kent.

PEARS.

Althorpe Evassanne,
Bartlett,
Belmot,
Beurré Easter,
" D'Aremburg,
" Diel,
" Golden,
Buffum,
Bezi de la Motte,
Bergamot Suisse,
Bergamot Gansels,
Burgmestie,
Capiamont,
Dix,
Duchesse D'Angoulême,
Frederick of Wirtemburg,
Heathcote,
Henry Fourth,
Jargonelle,
Julienne,
Lewis,
Muscadine,
Mouth-water,
Marie Louise,
Napoleon,
Winter vergoulue,
Moorfowl egg,
Ah! Mon Dieu,
Bell pear,
Urbaniste,
Cabots,
Colman,
St. Germain,
Meadow,
Seckle,
Sugar,
Madeline,
Roi d'Eté.

PEACHES.

Bellgarde Clinton,
Columbia,
Early York,
Empress of Russia,
Early Royal George,
Favorite,
George the Fourth,
Heath cling,
Henricks' Heath,
Lemon cling,
Large white cling,
Morris white,
Malta,
New-York rareripe,
Newington,
Nivette,
Polls Malacatune,
President,
Red rareripe,
Snow peach,
Selby's cling,
Sweet water,
Van Zandt's superb,
Yellow Malacatune,
Oldmixon,
Yellow rareripe,
Astors,
Belle de Vitry,
Chancellor,
Grosse Mignonne,
Early vineyard,
New noblesse,
Sul Hamsted,
Willet's Mignonne,
Madeline de Coursen,
Old free stone mixon,
Red nutmeg,
Late admirable,
Early vanguard,
Royal George,
Barrington,
Yellow cling,
Teton de Penns,
Robinson Crusoe,
Early purple,
Double flowering,
Flushing,
Lady Galatin,
Lady Steward.

PLUMS.

Washington,
Apricot,
Bleeker's gage,
Duane's purple,

Flushing gage,
Cherry plum,
Green gage,
German prune,
Lucombe's nonsuch,
La Royale,
Mimms,
Orleans,
Prince's imperial gage,
Yellow gage,
Yellow egg,
Cruger's gage,
Coe's late red,
Jefferson gage,
White magnum bonum,
Bolmar of Washington,
Goliah,
Frost gage,
Holland,
Huling's superb,
Late yellow damson,
Semiana,
Violet Perdrigon,
Morocco,
Magnum bonum,
Livingston's red Orlean,

CHERRIES.

Bleeding heart,
Black,
Chrystal white,
White heart,
French white,
American heart,
Belle de Chirey,
Black eagle,
Black tartarian,
Dounton,
Downer's pale red,
May Duke,
Late May Duke,
Napoleon Bigariean,
Holman's Duke,
French Morello,
Black eagle,
Ox heart,
Remington,
Elkhorn.

APRICOTS.

Breda,
Gold blotched,
Moorpark,
Musch,
Orange,
Schuyler's,
Turkey,
Peach,
Violet.

NECTARINES.

Golden,
Peterborough,
Red roman,
Scarlet,
Perkins' seedling,
Lewis.

GRAPES.

Isabella,
Catawba,
Bland's Madeira,
Golden Chasselas,
White Chasselas,
Black Constantia,
Elsingburgh,
Black Hamburgh,
White Hamburgh,
Golden Tokay,
Saint Peter's,
White sweet water,
Tokay,
Black king,
Muscat of Alexandria,
Royal muscadine,
White Corinth,
Miller's Burgundy.

GOOSEBERRIES.

Common white,
Roaring lion,
Green ocean,
White smith,
Samel green.

RASPBERRIES.

Cretan red,
White Antwerp,
Red Antwerp,
Red Genesee,
Yellow Antwerp,
Double bearing.

CURRANTS.

Large white Dutch,
Large red Dutch,
Pale red,

Black English,
Missouri currant,
New Scotch currant.

FILBERTS.

Red kernel,
Frizzled.

STRAWBERRIES.

Red Alpine,
White Hanthois,
Ross' superb,
Graces glory,
Large early scarlet,
Hovey's seedling,
Keen's seedling,

ROBERT L. PELL.

Pears.

Roxbury, Mass Oct. 16, 1843.

Sir—I have placed on the tables of the American Institute six specimens of the "Vicar of Wakefield" *Pear*, gathered at intervals of seven days, commencing on the 31st of August. The respective weight of each pear at the time of its being plucked from the tree, is as follows, viz:

The specimens	gathered	on	the	31st August,	$3\frac{3}{8}$	ounces.
"	"	"	"	7th Sept.	$4\frac{1}{8}$	"
"	"	"	"	14th "	$5\frac{5}{8}$	"
"	"	"	"	21sth "	$5\frac{5}{8}$	"
"	"	"	"	28th "	$8\frac{1}{8}$	"
"	"	"	"	5th Oct.	$8\frac{6}{8}$	"

From the above statement it will be seen that the greatest increase in the fruit was between the 21st and 28th of September. It may be proper here to state that the best specimens on the tree were plucked, and that all the specimens are from the same tree.

The object of gathering the pear as early as the 31st of Aug., when the fruit had not attained only about one-third of its size when matured, was to test its capacity of ripening when thus early gathered, and also to ascertain which of the specimens would be in the highest flavor, and best order for the table and the market, when they should be matured, or perfectly ripe; and further, to learn from observation in how many days each specimen, after it was gathered from the tree, would be fit for the table.

The subscriber had another object in view, and which he would respectfully submit to the notice and favorable consideration of the managers of this National Institution; it is the growth and ripening of the pear as an *article of commerce.*

The capabilities of our country to produce beautiful and high flavored fruits is acknowledged by almost universal consent. Our *apples*, *pears* and *grapes* are perhaps superior to any in the world.

It may be a question with some cultivators, whose opinions are entitled to great respect, whether I have not over-rated the quality of our *grapes;* I would therefore state, from the best information, and from considerable experience, such as my various opportunities at the exhibitions of fruits in our country have given me, and among those the specimens now on exhibition in the horticultural room of the Institute, that the *foreign grapes*, when raised under glass in various parts of the country, have proved not only large in the berry, but equal, if not superior in flavor, to any ever produced, as a general crop, by the cultivators of England.

The size, color and flavor of our *apples*, after repeated trials in England, have been acknowledged to be superior to any imported into that country.

Our *pears* have not as yet undergone such a trial in the foreign market, that would warrant the subscriber to speak with equal confidence as to their respective merits in the opinions of the cultivators of England; but he entertains no dobut that they will bear comparison with the best specimens in Europe; and that they will, when the cultivators in our own country shall raise *pears for exportation*, and shall have made themselves well acquainted with the best varieties adapted for that purpose, and shall have also ascertained their time of ripening, and all other particulars, including the best method of packing, for making the cultivation of the *pear* a *staple article of commerce;* then, and not until then, will the pear be cultivated in the best manner, or the skill and enterprise of our horticulturists be fully developed. From this view of the subject it appears to the writer necessary that the cultivator should be put into possession of all the practical information which the fruit growers in the country are possessed of, viz:

1st. With the best soil and situation for the successful cultivation of the *pear* as it regards quality and quantity.

2d. That he should ascertain the varieties that ripen at such periods as are best suited for a *foreign voyage*, and would be best adapted to the markets of certain ports, as also their flavor, color, general appearance, and their particular adaptation to the wants and tastes of the people of the country to which they may be exported.

3d. The cultivators should also be in possession of the best information, from practical experience, as to the time the various sorts should be gathered, and the time they will ripen, in a temperature of 45, 50, 55, 60, and 65 degrees of heat, to enable him to export his fruit successfully to a foreign market, and also to bring his fruit into the home market to the greatest advantage. To be in possession of the effect of the degrees of heat on the ripening of *pears*, would enable the cultivator and fruiterer to execute an order for this delicious fruit, in varieties from one to ten sorts, if suitable notice is given, and thereby gratify those who consider the dessert as an important part of a good dinner ; and it is believed that the time is not far distant, when the dessert will be considered, if not the *most important*, at least *one* of the *gratifying* parts of a good dinner that cannot very well be dispensed with. To accomplish this most desirable object, I would respectfully suggest that a suitable premium should be awarded by the American Institute, in the year 1845, for the best communication on the propagation of pear trees, stating soil, situation, the best varieties, the size of the fruit, its season, and the best method of ripening it ; as also the number of days after the fruit is gathered and kept under various degrees of heat, until the fruit is matured and in its greatest degree of perfection.

With this information, and the well known sagacity and energy of the citizens of this great Republic, it will not be many years, in the opinion of the writer, before a new and productive source of commerce will be opened in the various ports of our common country.

Yours, very respectfully,
S. WALKER.

To the American Institute.

Farm of Hugh Maxwell.

In conversation with Mr. Maxwell, some short time since, he stated some facts in relation to the fertilizing power of a red marl, abundantly existing at Nyack, Westchester county, in this State, which induced me to visit the spot. I found Mr. Maxwell's farm ol 110 acres, bounded by the Hudson, well worth a visit.

The whole was in excellent fence, made of the loose stones found on the land, neatly piled about four and a half feet high, forming fields of from four to eight acres. The foundation of these fences has used nearly all the stones which were on the surfrce of the lands. And in this it would seem as if Divine Providence had caused the rocks to be distributed of the proper size for fencing. Had the pieces been much larger or smaller, they would not have answered as well as they now do. If they had been planted two feet under ground, or had been piled in larger masses, the labor of fencing would have been very greatly increased.

This farm, as well as all those about Nyack, lies on the singular mass of sandstone, included by a point of about five miles on the river. All the surrounding rocks are of other materials. This sandstone, when quarried, exhibits strata of a kind of red marl of many feet in thickness, lying between strata of the sandstone; the quarrymen throw it out of their way, and millions of loads are lying near the water's edge, so that in many places vessels can lie along side a bed of it, and slide it on board. On Mr. Maxwell's farm, the former proprietor, desirous of making extensive hard walks through his garden, caused this marl to be put upon them about one foot deep. Soon after this was finished, the walks began to produce white clover in such profusion and persevering succession, that all prospects of using the paths in that condition was abandoned; they could not be kept in order with the hoe. Mr. M. being strongly impressed by this occurrence, determined on applying it to the surface of his farm. I saw a field of *corn* of several acres, which had been top-dressed this year with the red marl, now bearing not less than eighty bushels of shelled corn to the acre; as great a product as is obtained from the best city manure, costing at Nyack nearly thirty-seven cents per bushel.

I saw an upland field of *wheat*, on which as an experiment, Mr. Maxwell had top-dressed with this marl, a space of three rods by two, from which I pulled an average bunch of straw stubble, that is more than double the size and weight of any like parcel of stubble to be found in the whole field of several acres. Unfortunately the husbandman had cradled all the wheat indiscriminately, which prevented Mr. Maxwell from examining the separate products of the wheat. I should not hesitate to pronounce it a double product. Mr. M. top-dressed a field of oats with this marl, and the yield was *seventy* bushels per acre.

He top-dressed a field of clover with it, the third year from the seeding, and the product was heavier than the crop of the *second year*. This field was dressed with ten loads of marl per acre. Mr. M.'s corn is large twelve row yellow, and the stalks are about ten feet high. The corn blades never curled during the late drought, while other fields all curled. Mr. M.'s corn was worked with the hand-harrow once, with the cultivator twice, and was hoed twice, no ploughing between the hills. Mr. M. thinks that in dry weather, it is very injurious to run the plough through, for it cuts the smaller roots of the corn. Mr. M. has tried twenty-five bushels of hickory ashes against twenty-five of anthracite coal ashes, and found no perceptible difference in the result.

The general effect of this red marl is perceptible in almost every plant and tree in that vicinity. Fruit trees are especially vigorous and free from disease. Flowering shrubs, roses particularly, seem not to have been touched by any insect.

I pulled up a mullin stalk growing on a naked mound of this marl, which measured *nine feet* in height, and the flower stem, which is covered with buds, is four feet in extent. The trees, excepting peach alone, are more thriving than those I have any where seen. The peach trees have the yellows.

Moss roses growing in rich grass are remarkably strong. Mr. M. finds that they do better closely surrounded by grass, than on clear ground.

He has ten kinds of healthy cherry trees, including the red and white ox-heart, and the bull's-eye. He has freely given, and wishes to distribute buds and grafts to all those who ask for them.

Mr. M. has very healthy apricots, which have yielded fine fruit. *He smoked the blossoms with sulphur and pitch*, and all the fruit was perfect. *This smoking was done in the evening.*

Some of Mr. M's fields had never been but partially cultivated, on account of being so swamped that cattle mired in them. He made in one four acre field a drain ten rods long and three feet deep, filled in with coarse stone. This drain formed a *perpetual spring for his cattle;* and this barren field has now buckwheat of at least *thirty bushels to the acre:* one and a half bushels of seed were sowed per acre, no manure needed. This drain cost $1.75. Twelve acres were drained in the same style, at a cost of $150. This field is now fine, and asks for no manure from New-York or Nyack marl. He prefers the same amount of marl to best New-York city manure for all grains and grasses.

Mr. M. has the old English yew thriving in open air in winter;

the European mountain ash; white and red Linden, red maple, weeping ash, weeping beech, weeping elm, Madeira nut, (one five years old bearing fruit;) Spanish chesnut, now in fruit, (this tree has also some blossoms on it at this time;) apricots grafted on plum stocks are very thrifty.

In passing through Mr. M's. barn yard, I noticed a couple of horses, one of which was hoppled with a strong iron chain. What mischievous young horse have you there? He replied it is my old family mare Kate, who has carried me and my wife and children safe for the last twenty-one years! I bought her when she was about four years old, but she will break fences now (wooden ones) with her irons on; she is active and cunning.

I remarked at Nyack the work of the locust, and Mr. M. and Thomas A. Emmet, Esq. examined with a good microscope, a twig worked by the little insect. The twig being split in the line of the work, exhibited the whole process of the egg deposit. The twig is pierced nearly to the centre at every three quarters of an inch, or nearly so. The wood is rendered fibrous, it is then lifted up, and the eggs, which are of a long oval form, are deposited side by side at an angle of about 45 degrees to the grain of the twig, and the fibrous tuft of wood placed over them, with its end sticking out. These incisions being repeated every inch on a line for some few inches in each twig. With the microscope we saw the eyes of the young locusts, always heads to the centre. The general outline of the young animal was perceptible through its delicate membranous cover They moved slightly on being disturbed. Almost every twig so operated on by the locust was entirely dead. The magnifying power of the microscope was perhaps forty or fifty.

I visited an apple orchard at Nyack, which arrested my attention by its regular and healthy appearance. I found young Van Houten at home, who with perfect good feeling and true politeness gave the account of the orchard which I desired. When his father was about fifty years of age, he undertook to plant 150 winter pippin trees on that spot. His neighbors thought him an old fool to plant twigs of apple at his time of day. Young Mr. Houten then about sixteen years of age, held the little nurslings in the holes which his father filled with soil. The old gentleman continued to prune them so that they are widely branched, and open for air and sun within the mass of branches. For twenty or twenty-two years past, the old gentleman has often received $1,000 a year for his apples. Sometimes $6 per barrel, sometimes sold in the orchard for $1 per barrel. That old gentleman and his wife are now between them 174 years old. Let no man be afraid to plant winter pippins because he is fifty or sixty years old.

I have been highly pleased with my excursion. When gentlemen of high rank in learned professions are found turning that intellectual force which has influenced the most wealthy and intelligent portions of mankind, from law, politics, &c. to that greatest, best of all arts, agriculture, I look for good results and I find them. The old world is hard at work in this direction, and I hope that we shall watch her operations with the eye of our own bird, and see to it that we be not excelled in any good thing.

H. MEIGS,
Sec'ry. Farmer's Club.

New-York, Oct. 22, 1843.

On the Care of Cows.

In the matter of appearance and usefulness of cows, great care ought to be taken of them; their pasture fields ought to be small and well watered, containing only pasture sufficient for two weeks, and then shifted to another field, so as to have a rotation of fields from one to four, which will make one month and a half before they return to the same pasture.

As soon as they are removed from a pasture, horses ought to be put in; sufficient numbers to eat all the grass that is around the cows' manure, which grows up, that the cows have left. The horses will free the ground of all the high grass, and give a chance for the more sweet and tender grass to grow up, and the pasture will be more healthy by having horses to pasture in them for about two weeks after the cows leave them, and then let the pasture rest about four weeks; that is, the cows to occupy two weeks, then the horses two weeks, and then rest four weeks.

A jackass is healthy among horses, and will eat thistles or weeds that neither a horse nor a cow will eat. If it is not convenient to get horses, the pasture ought to be mowed as soon as the cows are removed; that is, all the high grass cut down, even if it is not more than two inches above the other grass. No wild grass or weeds ought to be permitted to get much ahead of the sweet and good grass. Coarse and sour grass, by permitting it to grow, will supercede or injure the good. But by cutting it down every two months, its own nature will be changed. One horse to four cows will keep both horses and cows in a healthy state, and generally regulate the pasture; but the mower ought to go through all pasture lands every month, and cut all high grass and weeds. The fences ought to be kept good. Every field ought to have a sufficiency of water in it. For manner of bringing water where it may be wanted, see aqueduct.

The cows ought to be regularly salted; milch cows twice a week, and dry cattle once a day, about a quarter of an ounce to each at a time. Milch cows ought to be put in a good dry pen or barn-yard every night, and there milked night and morning, none to get out until all are milked, and they ought to be salted in the yard, but never until all is done milking, and not oftener nor more than is described above. The owner, or some faithful person, ought to be particular and see that all are milked and the udder well rubbed, if any lumps are in the bag. A cow will milk more, and the milk will be better, by having it all taken away every time. If the teats are sore, or the cow hard to milk, insert a silver tube, smooth at the ends, and as thick as a good sized knitting needle, and push it gently up the whole of the teat, until the milk comes freely, and while it is in, keep rubbing that quarter of the bag out of which the milk is running.

The calves ought not to be permitted to suck, nor ought the cows to be within sight or hearing of them. In the fall of the year, when the grass is nearly done, all the fields ought to then be opened to the cows, and if scarce, they ought to be fed, and by no means suffered to lose their flesh. As soon as the nights get cold, they ought to be put in the house. Their stables ought to be made as follows, and under or in the basement of the barn. The barn ought to be thirty feet wide, and sufficiently long to accommodate all the full grown cattle, and eighteen feet post or high. Cows ought to be let out to water every morning as soon as milked, and if the weather is moderate, remain several hours. A long trough ought to be placed before them, where such roots as are designed for them may be given by putting them into the trough out of the root house. Nothing should be washed; clay is good either for horses or cows. In winter, all kinds of turnips and potatoes are good for cows. Horses ought to be so arranged that their breath and the cows may mix, and a few goats will be healthy for both horses and cows. If cows are fed on oat straw, they ought to get it fresh threshed. Corn stalks, if well cured, are fine feed with a little hay at night; the stalks may be given to them in the barn-yard during the day. The yard being on the south side of the barn, may be sufficiently warm during several hours of the day, unless in very cold weather. All the stalls of both cows and horses ought be concaved lengthwise, and about eight inches lower behind than before. Such form will give sufficient fall for water, and ease to the animal when either standing or lying, for on whatever side they may lie, their feet will be lower than their sides, and when they stand they can change positions, which is what they want; besides, their beds will be inclined to where damp may be expected, when their sides will always be dry, and by the above formation of the stalls, they can at any time rub all parts of their bodies.

The buildings for young cattle ought to extend in a straight line with the north side of the barn, both east and west of the barn as far as may be wanted, according to the number of stock kept. Such building ought to be as low in the floor as the cow-house or basement of the barn, and filled outside with clay as the other. It ought to be 12 feet wide, and 12 feet posts above the basement. There ought to be a rack all along the backside, extending from the ground to the ceiling, and so eaved out at the top as to be 6 inches from the back wall at the bottom, and three feet at the top, the floor above having an opening all along the backside one foot wide, where the fodder is put into the rack, and always kept full or nearly so. The rest of the basement should be open like a shed, and the young cattle left to run out and in as they please. Fences, however, ought to be run from the rack to the back of the yard, to divide the yard in such a way as to only have young cattle of the same age in one pen, for otherwise the older will hurt the younger, as well as prevent them from feeding. The upper part should be filled with such fodder as is intended for feed below. All this class, if well arranged, and racks kept full, is all they want, except straw scattered through the shed to lie on. A good cistern ought to be so placed as to receive all the liquid from the cows, stable and yard, and at convenient times cast it away on the neighboring lands.

JOSEPH CARTER.

Milking qualities of American Cows—Management, Feeding, &c.

Morrisania, N. Y., Jan. 18th, 1844.

Dear Sir—In answer to yours of the 4th, which reached me on the 12th, I will state briefly my experience, and if not done as fully as at the club, you must remember that I have no one to ask questions now.

My dairy was established in 1837, and I have found that the best cow I ever had was a short horn heifer. The best cows are our American breed, picked up around the country. Our mode of feeding has been pasture and soiling in the summer, and hay, Indian and oil cake meal and shorts in the winter, and sometimes sugar beets and parsnips. We have generally sowed a piece of rye on very rich ground, for the first spring feed, which is ready to cut by the first of May, and when young, before the seed stalk has started, is good for milk. Our next has been clover, then green oats; by that time the first sowed corn is fit to cut; this last, by being sowed at different times, can be kept fit for use till frost, and is, I think, the best of all green feed for cows, as it lasts longer, yields more feed, and makes as much and as milk as any other feed. Our highest feed in winter, when we are trying to beef our cows, and milking them at the same time, has been about six quarts of Indian meal, four quarts of oil cake meal, a half bushel of shorts, and as much hay as they could eat, per head, per day. I think sugar beets a good feed, but cannot say whether they can be raised as cheap as other feed. Those that I fed were raised for a sugar mill which did not use them, and I bought them for 16 or 18 cents per bushel. At that price they do well for early spring feed; in the winter I do not think they are better than turnips, or good as potatoes. Out of a lot of cows, averaging the last four years 130 head, we have not lost morethan 4 by sickness. The above is a hasty statement of facts, which I hope will answer your purpose.

Yours truly,

G. MORRIS.

To H. Meigs, Esq., Sec'y Farmer's Club.

Lambert Wyckoff's Statement of his Cabbage Crop.

The following is my statement respecting a crop of cabbage which I raised this season: (Peter Hulst, Farmer.) There were twenty acres planted with cabbage: about eight acres was sod, and was ploughed in the fall, and crossed-ploughed the next spring, and harrowed till the ground was in good condition. Eight acres were planted after a crop of early peas, and the balance after early potatoes. There were about 6,000 planted on an acre. On acccunt of the drought last summer not more than one half came to perfection.

EXPENSES PER ACRE.

Forty cart loads of street manure,	$16 00
Drawing manure, and labor on the ground,	3 00
Ploughing and harrowing,	3 00
Hoeing,	6 00
	$28 00
3,000 heads sold at 2 cts. each,	$60 00

(Signed,) LAMBERT WYCKOFF.

Bushwick, L. I., 15th Nov., 1843.

R. L. PELL's *mode of raising the different articles exhibited at the Fair of the American Institute, for which premiums were awarded.*

RYE.

On the first of September, my seed rye was placed in a vessel of water, mixed with fine salt to a sufficient consistency to float an egg. The light seeds were taken off with a skimmer. After the grain had remained in the brine 10 minutes, it was drained through a seive, mixed with lime, charcoal dust, poudrette, and ashes, in equal quantities, and immediately sown, at the rate of 3 bushels to the acre. The ground had been thoroughly ploughed deep, and harrowed, but not manured. In April, the field was seeded with clover seed, a bushel per acre, plastered, and rolled twice. My intention is to plough in the clover for manure after taking off the crop. If Liebig is correct, it will add 17 lbs. of ammonia to the soil—the grain was cut in the milk on the 11th of July, housed on the 18th, and weighed 60 lbs. to the bushel.

SUGAR BEETS.

The sugar beets were grown as follows: on the 13th of June, a quarter of an acre of sandy loam land, on which potatoes had been planted the year previous, was ploughed, harrowed, and furrowed. The furrows were filled with soft stable manure and lime, which was covered with the plough; drills were then made by hand, and filled with a composition of ashes, salt, muck, poudrette, oyster shell lime, and charcoal dust, in equal quantities, except salt, a small portion of which only was used. The seeds were soaked 12 hours in chamber-lye, sown on the composition, and covered with a hoe. On the 11th of July, the plants were thinned to 12 inches apart, and hoed, after which they were ploughed once. On the 30th of October, they were gathered and measured; the quarter of an acre yielded one hundred and ninety bushels.

EGG PLANTS.

The egg plants exhibited, one of which measured three feet six inches in circumference, were raised by my gardener, Maurice Cunningham, in the manner following. On the first of April, the seeds were sown in pots, filled with charcoal dust, sand, and garden mould, and started in a hot-bed. They were repotted on the 21st of April, and set out early in May in their proper place, with the ball attached, the bed having been trenched to the depth of two feet six inches, and enriched with charcoal dust, ashes, lime, and coal ashes. Once during the summer, they were watered with spirits of ammonia, *diluted.*

SWEET POTATOES.

The sweet potatoes which received the first premium, were raised by my gardener, Maurice Cunningham, from sets obtained from the south.

They were started in thumb pots, under double glass, in the conservatory, and when six inches high, were planted in a piece of ground, the whole of which was prepared thus:—Trenches were made to the depth of two feet six inches; a layer of rotted stable rotted manure nine inches deep placed in the bottom; upon it a layer of charcoal dust six inches in depth, covered with top mould and spaded together; after which, oyster shell lime to the depth of six inches; the same quantity of river sand, and top mould to the depth of three inches; all which substances were thoroughly incorporated with each other. Land so prepared will grow any crop.

CULINARY VEGETABLES.

The culinary vegetables for which the Institute awarded the Silver Medal, were all raised in trenched ground, prepared as described for the sweet potatoes; lime, charcoal, ashes and river sand, were freely used for all. My vegetables nearly all were started in pots under glass early in the season, and set in the open ground at the proper time, by which means I have rarely been disappointed in a crop by the frosts in May. In speaking of lime, I am particular in mentioning oyster shell, as I believe most of the stone lime contains *magnesia,* which substance is known to be injurious to many soils.

LIMA SQUASH.

To the President of the Farmer's Club:

SIR—I beg leave to submit to the club the two following communications, copied for the purpose, the originals of which are now in my possession. The object of the experiments you will perceive, is to show the result of a peculiar method of vine culture, and the astonishing success, which, in these two instances, attended this deviation from the general practice.

"*Weehawken, N. J., Dec.* 22, 1844.

"To the Hon. FRANCIS PRICE:

Dear Sir—Agreeable to promise, I enclose the account of an experiment made by the gardener at your public place, known as the Weehawken Pavilion. After preparing a place for the deposit of two Lima squash seeds, (about the 10th of June,) within three feet of the vegetable garden, and directly in the grass or meadow, where some weeds had been thrown the previous year, forming a small heap; he hoed them after they had sprouted, I think, two or three times; this was before the vines commenced to run; in the meantime, the grass in the meadow was sufficiently grown for mowing, and was mowed accordingly and removed; at which time the gardener commenced training the vines, there being two; the one was led to the south, and the other to the north. The one to the south extended about seventeen yards, or fifty-one feet, while the other leading to the north, reached about twelve yards, or thirty-six feet; both running directly upon the meadow so as not to interfere with the ground used for vegetables. By the time the meadow was wanted for fall pasture, the squashes were ripe, taken from the vines and weighed. From the two seeds planted, between six and seven hundred pounds of squash were produced. The vine running to the south had on it about two-thirds of the whole quantity. I mention this circumstance, for the reason that vines of all descriptions, from my own observation, are more productive when grown to the east or south, than otherwise; this perhaps you have observed, and if you can give from this short account information to any one else, you will no doubt be the means of conferring something more useful than I had dreamed of when the experiment was commenced.

"I am, dear sir,
"Very respectfully, yours, &c.
("Signed,) "B. JESSUP."

The other is as follows:

"Mr. Francis Price,—I take great pleasure in answering your inquiries in regard to the great, and I believe I may venture to say, unparalleled yield from one pumpkin seed. A few years ago an agricultural friend discovered a pumpkin vine growing upon a heap of manure which had been deposited in his field, and to which he gave the necessary attention through the season, and from which was gathered in the fall, between eighty and ninety large and sound cheese pumpkins. The manure heap had been taken from the cow stables the previous fall, and deposited in an old worn out field.

"Respectfully yours,
(Signed,) "JOHN STURGES.
"*Hudson Co. N. J., Dec.* 28, 1843."

These communications are from gentlemen of known character for truth and respectability.

It would appear from the experiment related above, that any field, no matter how unproductive, or impoverished, may be made to yield immediately, without waiting for years to restore it to general productiveness, vine crops, and by analogy, all other hill crops, where the roots do not spread to any great extent, with great promise of ample remuneration. It may indeed be questionable, whether any other method can be adopted by which a profitable crop can be obtained from exhausted ground, in the same space of time, and with as little outlay or expenditure.

But the subject is not confined to exhausted fields, as shown in the case of Mr. Jessup. Here was a meadow or grass field, the crop of which was cut and gathered without interfering with the vines, and again the fruit of the vines was gathered without interfering with the use of the field for pasture, in due season.

An acre contains 43,560 square feet of ground. Say that in the case of squashes or pumpkins, a vine requires 50 feet in length, by 5 feet in width, to afford sufficient sun and air, and that each hill has two vines, the two vines thus occupying, in connection with the hill itself, (which should contain about nine square feet,) 500 square feet; and in round numbers would allow about 90 hills to the acre. The vines will not commence to run before the grass matures, and is cut and gathered. The quantity of ground which 90 hills of 9 square feet each occupy, is about 810 feet. This is all that the grass has been interfered with, or the quantity of grass surface diminished. The vines should be trained to the south, to favor the idea of greater productiveness. Suppose now, that we allow 400 pounds, instead of 700 pounds for each hill, according to Mr. Jessup's experiment; then we should have for the 90 hills, 36,000 pounds, or 18 tons of squashes or pumpkins. The value of such a crop in the market of the city of New York suppose $10 per ton, equal to $180 per acre, or to the cultivator as food for his stock, cannot be estimated less than good hay, cannot be fixed perhaps with any degree of certainty, but which, it must be evident to any person, would be an item in the general table of profits, of no trivial account, either in connection with a crop of grass and pasture, or from fields that otherwise would produce nothing.

As already said, this mode of culture may be extended to many other vines and hill products, besides squashes and pumpkins, and perhaps there is no other method of securing so good a crop, the first season, and any impoverished soil which promises equal advantages, and as in the case of Mr. Jessup, a double crop. The cheese pumpkin does not vine as far as the squash, and therefore would allow of more hills to the acre, and according to the above experiment it is more productive.

I submit the communications of Mr. Jessup and Mr. Sturges, with the few brief remarks I have added, to the gentlemen of the club, for the purpose that the subject may secure such consideration as in their opinion it may merit, and especially whether grass fields are not better adapted to the purpose of raising vines by this mode of culture, than ploughed fields.

Very respectfully,
FRANCIS PRICE.

Beets and Parsnips.

In compliance with the rules of the Institute, making it obligatory on all persons receiving premiums for superior productions of agriculture, to specify the mode of raising the same, the cost and otherwise, I beg leave to state some of the chief particulars to be observed in raising such beets and parsnips, for which the judges at the late Fair have awarded me a premium for each; and permit me to refer you to my last year's report for my mode of raising celery, the superior quality sent to the Fair this season having also been awarded a premium.

In selecting lands best adapted for cultivating beets and parsnips for the table, regard should be had to the situation, if possible. The lands should be fully open to the south, the ground should be of a light moist nature, with deep soil mixed with clay, such as will keep open and light during our hot dry weather; the land should be turned up in the fall, some ten or twelve inches deep; early in April spread thereon rotten barn-yard manure, in value about twenty-five cents to each square perch or rod, turn this manure under some eight or nine inches deep, and rake the top smooth; draw the drill from twelve to fourteen inches apart. Thus far the preparation is alike for both beets and parsnips. For beets open the drill from one-half to two inches deep, and for parsnips not to exceed three-fourths of an inch deep, drop the seed for each in the drill some one or two inches apart, carefully rake over the seed and soil, and when the plants are up strong, then thin them to the distance of six or eight inches from each other in the rows, and during their future growth great care should be observed to keep the ground free from weeds, and well hoed. If the season is favorable the yield per square rod or perch will be about as follows: beets about three and a half bushels, average price fifty cents, $1.75; expense seed and manual labor, thirty-five cents; manure, twenty-five cents; rent of land, twenty cents; market expense for man for selling, about twenty cents, $1.00; neat gain seventy-five cents per square rod. If the season is favorable the profit would be about seventy-five cents per rod, or $30 for each quarter acre; quantity of seed to each square perch or pole, one ounce, or in measure one-fourth of a pint; parsnips about the same, except a little more expense in the attention for securing them in the fall, they not being quite as ready sale as the beets.

JOSEPH CLOWES.

Harsimus, New-Jersey, November 27th, 1843.

An Aged Horse.

Mr. O. Mauran, of New-York city, entered for exhibition at the late Fair, a horse forty-one years old; his account of which is given below:

"This horse, 'Charles,' I exhibit is the greatest curiosity in this country. He was raised at Horse Neck, Conn., in 1802, by a Mr. Brundage, and brought to this city in 1810, by Mr. J. Sackett, and sold to Mr. Isaac Tucker, (John-st. stables,) who sold him to Mr. Oliver H. Hicks, and was afterwards owned by several persons whom I know personally in this city. I purchased him the 20th of August, 1826; since when he has been in my possession and almost in constant use, and has never been sick or out of condition during the time, nor never had a sheet or blanket on him. He is little less than a four minute horse, and can perform it now; he feeds the same as my other horses, and is as active as a colt.

(Signed) "O. MAURAN.

"72 *Wall-st, New-York, Oct. 17th*, 1843."

Jeromus Johnson's process of making butter.

Allow me if you please to answer your letter for my daughter, and send you the following receipt for making butter.

The process pursued by my family in making fine butter is as follows: After the butter is taken from the churn, and the buttermilk well worked out of the butter, then salt it to the taste with fine rock salt pulverized. Add one table spoonful of pulverized loaf sugar, and half a table spoon of pulverized saltpetre, let it stand a short time, then work it well through the butter, and it is fit for immediate use. The quantity of butter at a churning may vary from ten to fifteen pounds; to this quantity we use the above ingredients. A larger dairy will require an increase of loaf sugar and saltpetre.

Butter made according to the above receipt will keep sweet much longer than the simple mode of using fine or common salt only. My family have found our butter made in the heat of summer, with the use of loaf sugar and saltpetre, to retain its sweetness until the next spring, and preferable to butter made in March or April.

I would here remark that the most important principle in the making of fine sweet butter, is to have everything connected with the dairy *sweet and clean*, or the labor of the dairy maid will be in vain.

(Signed,) JEROME JOHNSON,
Goshen, Orange Co., N. Y.

John A. Smith's process of making butter.

I take the milk and set it in tin pans holding from ten to twelve quarts each in a cool place, letting it stand until it becomes thick, fit for churning. I put about 100 quarts into a barrel and a half churn, adding to it one-quarter to one-third water; my churns are operated by water power. After churning we take the butter and place it in a cool cellar, sixteen feet under ground, after washing it with cold water; salt it to taste, using blown salt. The brine and buttermilk are then worked completely out. It is packed in pails or firkins for market.

I keep 30 cows. In the spring from the time of calving until pasture is fit to turn them in, I give them four quarts of ground rye and corn per day. I make about 180 lbs. of butter from each cow, averaging 16 cts. per lb.

The buttermilk is churned over, and I make from 1 to 1½ lbs. of butter, which we use in the family.

To keep butter through the winter, we pack it in pails or firkins, and pour over it a brine composed of rock salt, saltpetre, and loaf sugar, and it will keep through the winter and be as sweet as when it was put down in the fall.

(Signed,) JOHN A. SMITH.

Montgomery, Orange Co., N. Y.

W. H. Davenport's statement of the manufacture of Pine Apple Cheese.

In all cases the milk and rennet should be sweet. When the curd is properly produced, break it up very fine, cook it well, but not to overheat. Season with clean pure salt. Put the cheese or curd into the press or mould, which are of pine apple shape, with a neck, and open in the centre, and fastened together by clamps or clasps. Fill the mould full, also the neck, and press with a round follower to fit the neck. Keep it in the press twenty-four hours, take the cheese out and cut off the neck, and sear it over, then dip in hot whey to form a hard rind, then draw over them tightly a net with interstices of a diamond shape, which forms the indenture. Suspend them from the neck and keep them so for four weeks, then take them out of the nets and set them on trenches on shelves, and in three months they are cured and fit for market. Pack them in cases of ten each with partitions between them. (Signed,)

Wm. H. DAVENPORT.

P. Hawley's method of making Cheese.

We take pains to keep the cows healthy, and have none that are very old; also giving them plenty of salt and fresh feed. Putting in the rennet while the milk is warm from the cow. In extreme hot weather we find it necessary to cool it a little with water. Great pains are taken to keep the rennet sweet, as also every article used in manufacturing the cheese from the *milk pail* to the *press*. When the curd is sufficiently hard we break it with an instrument for the purpose as the ordinary method of breaking it with the hand separates the butter; we slice the curd as often as it closes, until sufficiently hard to chop, then scald and vary the heat according to the season. We make the cheese of a size averaging twenty pounds each. Color with annatto, and case them with muslin to protect from insects and the direct action of the heat. (Signed,)

Norfolk, Conn. P. HAWLEY.

Edwin Smith's method of keeping Cheese.

The cheese which received the first premium at the 16th Annual Fair in October last, was made by Mrs. Moore of Butternuts, Otsego Co., N. Y., for Edwin Smith of Brooklyn, L. I., in the following manner:

The dairy consists of about twenty cows. At night the milk is strained into a tub to stand until morning, then warmed to milk heat, and to this add the morning's milk. Set it while milk warm, using rennet according to strength sufficient to set it well. Let it stand about one hour. Dip off the whey, break up the curd thoroughly into a basket, and let it remain until the whey is entirely drained out, then salt it, using little more than half a pint of very fine salt to a cheese weighing, say 30 lbs. Put it into the press until thoroughly dry, which takes about three days, then keep it in a dry place on a shelf, turning it twice the first day and once each succeeding day until well seasoned. Rub on salt for a few times when turning, when colored use a piece of coloring about the size of a common bean for a cheese of thirty pounds. Let the coloring be well dissolved in the milk before the rennet is put in to set it.

When two curds are used, put away the one to be kept over, well broken up, and mix with the new curd *thoroughly* before putting it into the press.

It is important that cheese should be properly kept to give it age, which is very essential to make it *excellent.*

All the writer claims in this matter is the method of keeping cheese.

When the cheese is taken from the shelf in the spring cover it with cotton cloth pasted on when dry. Whitewash it with a thick coat of lime and keep the cheese on shelves in a temperature of about 65°, turn the cheese for six months once a week, and after that monthly.

If whitewashed yearly it will keep *forever.*

(Signed,)

EDWIN SMITH.

(E.)

REPORTS OF MEETINGS OF THE N. Y. FARMER'S CLUB.

Meeting of the New York Farmer's Club.

American Institute, March 5, 1844.

Gen. J. Tallmadge in the Chair.

Hon. Henry Meigs, Secretary.

Mr. R. L. Pell, presented a paper, remarking on several varieties of grain, &c., accompanying, as follows:

Egyptian Wheat.—Is distinguished from every known variety, by its branched, compound spiked form, the seeds being as numerous on each spike, as the ordinary *wheat*, all of which grow upon a single stem—frequently five in number. The straw is strong, and the grain amazingly fruitful. It requires fertile land and a favorable exposure, otherwise in this climate it will produce but one spike.

Egyptian Corn.—A different grain exhibited by Mr. Depeyster at a former meeting, is often mis-named Egyptian wheat. It is an entirely different article, somewhat resembling broom corn.

Mr. Depeyster stated at a former meeting, that 100 bushels per acre could be obtained from rich ground. He valued it highly for feeding fowls; they were, he said, extravagantly fond of it. He thinks the quality of grain improves in our climate. In 1842, Mr. Jeremiah Van Winkle reported to the American Institute, that with slight manuring he raised (sowed broadcast) at the rate of 77 bushels per acre, weighing 64 lbs. to the bushel.

Multicole Rye.—If sown broadcast early in the season, may be twice cut for fodder, and then allowed to come to maturity the ensuing year. It grows well in almost any light sandy soil—produces a large quantity of small grain—has been lately introduced, and may with proper attention become a valuable *acquisition*.

Sample of *Etrurian Winter Wheat*, second product in this country, imported and first cultivated by Com. Stuart, a very productive variety.

German Spring Wheat, an unusual producer called "Emer."

Calcutta Flax Seed, yields 20 per cent more oil than the American variety.

A communication was received, dated Curacoa, Jan. 3d, 1844, from the Curacoa Agricultural Club," through Capt. J. D. Williamson, U. S. N., proposing that a correspondence should be opened with "the New York Farmer's Club," for the exchange of seeds, fruit, plants, &c., and offering their services in forwarding the objects of the New York Farmer's Club.

It was unanimously resolved that the aforesaid proposals be accepted, and that the Secretary of this Club be requested to communicate the same to "the Curacoa Club," commending their generous, benevolent and patriotic designs, which cannot fail to be eminently useful in their results.

The communication also states that the Club have divided the Island into districts, and appointed a committee for the collection of seeds, fruits and plants, to be forwarded as soon as collected free of expense, with specimens of their sheep, together with a history of the Island, the course of agriculture, with specimens of their plough and other agricultural implements in present use, to be presented by Capt. Williamson of the U. S. Navy, to the New York Farmer's Club, in the name and with the respects of "the Curacoa Agricultural Club."

Henry Meigs, Esq., presented on behalf of Lieut. Richard W. Meade, of the U. S. Navy, some flower bulbs, especially Passion flowers, some Tea Kettle Squash seeds, and Cheremoya seeds, brought across the Isthmus of Darien from Panama.

Mr. Wakeman moved that the thanks of the Club be voted to Lieut. Meade, and that the Secretary be requested to communicate them to him. To show the operation of this Club, situated in our city, as a means of communication, almost immediately most of the seeds, &c., were distributed to go into the different States, and some are now on their way to the Oregon Territory, with the promise that a portion of the products of each shall be returned to the American Institute.

Mr. Carter presented a long report on potatoes, their culture and the best mode of preserving them, directions for transporting them to market so as to prevent bruises and injury, with a drawing of a potatoe planter. He says they should be planted on a level surface, near the top of the ground. If planted on a stone or board, and good soil put over them, they will produce good potatoes; or on new land among stumps, where they get no root downward, if covered with earth they produce well. Plough shallow for planting, and harrow well so as to make it level. Then plant in rows nine inches apart each way, 18 inches distant another set of rows in the same way. He gives the plan of an instrument which passes a furrow one foot wide exactly between the sets of rows, viz: three feet apart, turning up the mould each side, deep enough to afford two inches covering, which is to be drawn over the potatoes by a hoe, making of the whole ridge a flat surface, leaving a margin on each side of the potatoes, about three inches in width. The instrument to be passed between the ridges three times during the season, a little deeper each time, so as to afford each time a covering of mould of about two inches, to be drawn over and made level as above. Directions are also given for manuring, &c. Mr. C. calculates by the means proposed, to gain an increased crop of two hundred bushels over the produce of ordinary cultivation, and a better article. The report, which is very minute in the directions, with the drawing of the instrument, may be examined at the Depository of the Institute.

Mr. T. B. Wakeman presented a variety of papers transmitted to him by Joshua B. Hyde, Esq., a member of the Institute, now residing in London, to whom he stated the Institute were indebted for numbers of most valuable publications and letters, giving accounts of improvements in that country. Mr. W. applauded the course of Mr. Hyde, hoped his example would be followed. Every observing, intelligent member visiting foreign countries, may collect something which will be useful to his own country, and what could be more gratifying to a real American.

The first paper contained a drawing of a churn made entirely of block tin. The directions are to half fill the churn with cream, and place it in a pan of boiling water, and allow it to stand until the cream attains the temperature of sixty degrees. It should then be taken out, and a brisk, regular, and continuous motion kept up until the butter comes. By these means, it is stated, butter of excellent color and consistency may be made in ten or twelve minutes in the coldest weather.

Another paper contained an account of an instrument for expeditiously and effectually salting meat. "By the ordinary mode of salting, the inside of the joint sometimes becomes putrid before the brine reaches it. With this instrument a pressure is produced equal to from five hundred to two thousand pounds upon a square inch, which forces the brine through every part." Only half the usual quantity of brine, it is stated, is required.

Also a drawing and shorter description of Cottam's patent Dynamometer or draft gauge, used by the Royal Agricultural Society of England, for testing the draft of instruments presented. It is intended to remedy the continual vibrations of the indicator in common use. A small brass pump is attached filled with oil, the piston of which has one or two small apertures. There being no outlet from the pump, it is evident that when any shock occurs, caused by a stone, root, &c., the oil having to pass from one side of the piston to the other, the suddenness is greatly diminished by the resistance which causes the pointer to vibrate nearer the actual draught of the machine, and must give the mean result of the draught.

The incessant vibrations of the indicators at the ploughing matches held by the Institute, have embarrassed our judges, and various remedies have been suggested; this however differs from any before proposed, and it is to be hoped, some of our ingenious artists will examine the plan of its construction.

Drawings of a butter cooler are among the papers which may be seen at the Repository.

Also a drawing of a wrought iron stable bucket, for the house or farm. It is said its strength and durability have brought it into general use.

A small pamphlet containing certificates of the use of asphaltum for lining of tanks, covering of arches, tun room floors, barn floors, malt-house floors, pavements, carriage drives, roofing, kitchen floors, school-room floors, stabling, and railways.

Another pamphlet containing descriptive particulars of the Smithfield Club Christmas Cattle Show, for 1843. It contains sixteen closely printed pages, embracing a catalogue of the animals exhibited. Only about three lines devoted to a single animal. The premiums in money from £5 to £10. Many of these cattle were transported from five to six hundred miles. We are naturally at a loss to know how such an interest is created to induce farmers to leave their homes and encounter such fatigue, trouble and expense. The whole influence of the British aristocracy with all their wealth and power and the most eloquent of their orators are brought to bear in favor of these exhibitions.

The Rt. Hon. Earl Spencer, President.

Vice Presidents.—His Grace the Duke of Richmond, Rt. Hon. Earl of Scarborough, Rt. Hon. Lord Western, Hon Lord Moyne, Sir John Saunders Sebright, Bt., John M. Cripps, Esq.

They have Stewards, Bankers, and a Collector. Honorary Secretary, Humphrey Gibbs, G. R. A. S. E., M. H. A. S. S., F. M. R. S. I , Honorary member of the Agricultural Society of Avranches, Honorary member of the Cæsarian Society of Natural Curiosities of Moscow, Honorary member of the Universal Statistical Society of Paris, &c. What an august display of titles and dignities! Such appendages to names are somewhat ludicrous to our plain, republican views; but in a country of kings, nobles, and titled aristocracy, they have a mighty influence, and exalt agriculture in the eyes of the people.

Another paper was laid on the table by a member, containing the speech of Sir Robert Peel, delivered at the Tamworth Farmer's Club. He was a patron of that club, and also officiated as President. Peel is a name that has rang through Europe and America. He is found mingling among farmers, and stimulating them to improvement. What an example is this for our distinguished men! We hope to see the time when they will emerge from the degradations of party intrigue, and exalt themselves by espousing the cause of agricultural improvement at our farmers' clubs. Before 1844 expires, we hope to see our intelligent and statesman minded mayor presiding at a meeting of the New-York Farmers' Club. It is said that he knows nothing of practical agriculture—so says Sir Robert Peel. Still he proves himself to be a glorious member, and cheers on cheers followed his words—"What we want," he said, "is to learn how in the shortest time, at the least expense, to produce the greatest quantity of food, either animal or vegetable, for the consumption of man, without permanent injury to the land. How can agriculture be benefited? He answers, in three ways—1st. By practical experience, having followed the profession of a farmer.

2d. By acute and extended observation, or by reading the written treatises on agriculture.

3d. By conversation, by asking questions, by having doubts solved, by comparing experiments, &c. "I shall," he says, "be the last man to undervalue practical experience.—"*Founded upon very ex-*

tended observation, it is of the utmost value; but depend upon it, the British farmer is exposed to competition which will make the mere reliance upon limited personal experience a very limited source."

It is impossible, he tells them, to travel ten miles without seeing the greatest possible difference between lands cultivated by farmers relying merely on their personal experience, or when science has been united and brought to bear on cultivation.

While on the subject of reading, he refers to the library of the club, numbering one hundred volumes; and if more books are wanted, he gives them to understand they will be provided. He highly approves of club meetings for discussing practical points—putting questions, and having doubts resolved—rubbing each his own mind against the other. This the club allows. All that is required is 5s. on entrance, and 5s. per annum.

Sir Robert Peel shows them how gentlemen, who have not practical knowledge may benefit agriculture. 1st. By introducing good stock—and he offers to pay for the best bull a committee can select from Birmingham, to whom their cows shall have free access. He offers to appropriate lands for experiments, rent free. He states the result of an experiment he had made in raising potatoes, by applying three kinds of manure. The proportion was as follows: Stable manure, 9 bushels; Potters' do., a noted patent manure, 11 bushels; and guano, 15 bushels. Two acres produced £14 profit, about $70. The value of the land was about $5 per annum.

Again, Sir Robert offers to give long leases to induce permanent improvements for a number of years, in the first part of the lease reducing the rents He also proposes to destroy that portion of his game (rabbits and hares,) that do damage to crops. He concluded by warmly recommending the clubs.

Col. E. Clark presented the following, which was passed by an unanimous vote:

Resolved, That a circular be issued by the Farmers' Club, signed by the chairman and secretary, inviting the commanders of the U. S. vessels of war, and of merchant vessels, and also foreign consuls, to furnish the Farmers' Club with rare seeds, plants, vegetable substances, &c., &c., by which the interest of agriculture may be likely to be promoted.

Gen. Tallmadge read from an English paper called the League, showing the inexorable determination of the British Government to protect their farmers against the competition of foreign grain. The whole market was secured to them, except in cases bordering on famine, when there was a little let up by means of the corn law sliding scale. He read an account of a large quantity of heated foreign wheat that was carted from the custom-house to a dung-hill, and mixed with manure, to prevent its being consumed as food; also of several hundred firkins of butter, which was mixed with cow dung and tar, because it was not the produce of British cows. Also an account of a quantity of foreign corn thrown by the custom-house officers into the Thames, which the hungry people were scrambling for. The officers forbad them to pick it up, and ordered them to throw what they had gathered into the river. Quarrels ensued: afterwards, vessels were loaded and sent down the river out of the reach of the people.

He also read an official return made to Parliament of foreign grain destroyed, more than 3,000 quarters, under the inspection of the proper officers—enough to supply six thousand persons one whole year. Great Britain, at any sacrifice, secures the home market to her farmers.

Mr. Sharwood said he was here only for the interest he took in agriculture and the arts, and remonstrated in warm terms against introducing subjects foreign to the club, which was improvement in agriculture, not politics. He was surprised to witness an attempt before this club to create a prejudice against his native country, and ill feeling towards Great Britain.

Gen. Tallmadge stated that the wisdom of Great Britain was manifest in securing to their farmers the home market, which was essential to their prosperity. We ask the same for the American farmer. They have a right to destroy foreign corn under their law. It is a good policy in them. But I ask, of what avail is increased crops and great production without a market? and if our farmers are denied that protection which is the only security for one, have they not a right, and is it not their duty on all occasions when their interests are under discussion, to allude to it, to point to the better policy of other governments for an example? Why should we busy ourselves about increasing production, and acquiesce in laws that render that production of half value?

Mr. Carter moved that the subject of manure, assigned for this meeting, be taken up.

Gen. Tallmadge said it had been usual to precede the subject assigned by some other matter—that the usual time would be allotted to it. He remarked that Great Britain is wise in her legislation. She parentally guards the best interests of her people.

A report was made by Robert S. Livingston, chairman of a committee to which had been referred a communication from "the Practical Farmer's Club of New Castle county," on the subject of wool and sheep husbandry. The committee state that they have read the paper submitted with great satisfaction, and fully accord with the views, &c.—that it contains very valuable information on a most important subject, and recommend that it be published.

The extract below is marked by the committee as particularly worthy of attention, embracing very interesting statistics.

Wool and Sheep Husbandry.

The following is the estimate of the woollen business in 1839. It has probably increased 50 per cent since that time.

Number of fulling mills, ...	2,585
Woollen manufactories, ...	1,420
Value of manufactured goods, ...	$20,696,999
Number of persons employed, ...	21,342
Capital invested, ...	$15,765,124

It appears from the reports of the Secretary of the Treasury, that for the 8 years preceding 1843, there were imported into the country on an average, annually, upwards of nine millions pounds of wool. In 1841, it amounted to 12,391,035 pounds, and in 1842 to 10,910,382 pounds. The Hon. Wm. Slade, late a member of Congress from Vermont, has ascertained that for the first half of the fiscal year of 1843, during which time the late tariff has been in operation, it amounted to only 1,037,530 lbs., being a falling off on the average imports of the last eight years of 77 per cent, and as contrasted with 1841–2, of more than 82 per cent. Mr. Slade does not attribute this reduction solely to the operation of the tariff, though that was mainly instrumental, particularly the *coarse* wool provision. The tariff of 1832 admitted wool of the value of 8 cents and under, free of duty. It is curious that nearly all the wool imported was of this description. Taking the period above alluded to of eight years, from 1835 to 1842, and about 71,000,000 out of the 75,000,000 lbs. imported, was the minimum priced wool, though by no means always *coarse.* The condition and depressed state of the foreign market, the bad manner in which the wool was prepared and put up, reduced the price whence imported to eight cents, and then it came free of duty; and this wool it was that came in competition with our own and kept it down. Under the late tariff, wool must now, at the place whence imported, be of the value of 7 cents or under, and also be *coarse*, before it can come in under the small duty of 5 per cent.; none now comes in free, but if the wool is not coarse, though below the value of 7 cents, it has to pay a duty of three cents a pound, and 30 per cent ad valorem, making a duty of some 5 or 6 cents a pound on all such wool.

There is another very important point in reference to this foreign wool to be borne in mind. It is said to lose as much as some seventy-five per cent *in cleansing*, as opposed to some thirty-three per cent average loss on American wool. Thus, suppose one dollar buys, at twelve and a half cents per pound, eight pounds of foreign wool, which, including freight, insurance, commissions and profits, we will suppose to be its cost to the manufacturer—that one dollar buys, at thirty-three cents a pound, three pounds of American coarse wool; when cleansed ready for carding, there will be an equal quantity, two pounds of each—or for the wool clear of the dirt, the cost is fifty cents in either case. If this is so, thirty-three cents, it would seem, is likely to be the minimum price of our coarse wool, unless reduced by home competition, if it ever is. Judging from the great falling off in the importations immediately after the late tariff went into operation, and as the small duty of five per cent on the minimum priced wool is unequal to account for it, it is fair to suppose that this coarse wool provision has shut out millions of pounds that otherwise would have been brought into competition with our own common wool. The farmers and wool growers are exceedingly interested that this provision of the tariff law should be thoroughly, honestly and efficiently executed. They have a right to expect good faith and fidelity on the part of the manufacturers, independent of the action of the custom-house. They have stood shoulder to shoulder with them. They have sought the establishment and success of the manufacturing interest, and their votes and influence have mainly insured it. They have, in doing so, made few stipulations for themselves; but in this small boon that has been extended to them, they trust the word of promise will be kept to the sense.

A respectable eastern paper, the Boston Courier, of a late date, estimates there is in operation from 25 to 50 per cent more machinery than there was at the beginning of 1843. It is supposed there was on hand, at the beginning of 1843, at least half a year's clip of old wool, and the clip of 1843 was unusually large. It is also stated that the quantity of pulled wool had accumulated at the beginning of the last year to a great and unusual extent, owing to the falling off in the manufacture of flannels and other fabrics, in which it is principally used. The stock of every description is now said to be nearly consumed, except a moderate but fair supply, mostly in the hands of the manufacturers; and within the last sixty days wool has advanced considerably. It is now worth from 33 to 55 cents. It would thus appear that while the quantity of American wool likely to be in market during 1844 must be nearly one-half less than it was in 1843, there is machinery in operation to consume from 25 to 50 per cent more than was consumed during that year, or sufficient to consume almost twice the clip of 1844. There will hence be a demand for wool, and this demand will go on increasing from year to year; and the question is, who shall supply it—whether our own farmers and wool-growers, our own lands and sheep, or whether, failing to supply our own consumption with all our territory and advantages of soil and climate, we must import our wool from foreign countries? To show that this demand and consumption is likely to continue to increase, it appears from a note appended to a very able address lately delivered before the American Institute by the Hon. James Tallmadge—being an account of British woollen manufactures exported in 1841, made to Parliament—that Great Britain exported in that year of woollens to the amount of £5,748,673; that of this she sent to the United States £1,521,980, or over $7,000,000 worth, *being over one-quarter in amount of the whole British exports of woollens.* The amount she sent to the United States in 1842, as appears by the late report of the Secretary of the Treasury, is $5,457,721. There is no doubt it has been much less in 1843, during the operation of the tariff. Who can doubt it will every year diminish—that the same thing will take place in reference to this branch of manufacture as has in reference to the cotton, hardware, &c., and that we shall supply ourselves?

The aggregate amount imported from all countries of woollen manufacture in 1842, was $7,437,543. It is the largest item of our imports at this time, except silks, which exceed nine millions. It leaves our woollen manufacturers a fine margin, and they will diminish the amount of these imports at a rapid rate. Those engaged in the importing of foreign cloths see that this must be the result. A member of a large Philadelphia firm, exclusively engaged in this business, remarked the other day that they would be compelled to turn their attention to domestic goods; that as to the cassimeres, they were already being driven entirely from the market.

It is estimated it would take 2,000,000 acres of land to keep the sheep we require. We have now about 20,000,000 sheep; and the clip of 1840 is put down in the Farmers' Encyclopedia at 35,802,114 pounds. The sheep of Great Britain were estimated in 1834 at 32,000,000. She imported in 1841 for her own consumption, beyond her own production of wool, 52,862,029 pounds, almost twice as much as the quantity grown in the United States. We require for our own manufacture and consumption, or shall by the time we can grow the sheep, at least twice the quantity of wool we at present grow, and our flocks may safely be doubled.

The President announced that *Manure*, previously assigned for this day's consideration, would be in order.

Dr. Valentine observed that the chemical salts were at a low price, and might be profitably employed in a judicious way. He proposed to exhibit to the Club at the next meeting, the formation of an artificial guano, that would not cost more than one-fifth of the imported, and equally effective. The following are the ingredients:

Nitrate of soda,............................	20	pounds.
Sal ammonia,............................	10	"
Carb. ammonia,............................	5	"
Pearlash,............................	5	"
Sulphate of soda,............................	8	"
Sulphate of magnesia,............................	5	"
Fine bone,............................	60	"
Salt,............................	10	"
Sulphate of lime,............................	2	bushels.
Meadow mud, or street manure,................	1	cart load.
Carbonate of iron,............................	2	drachms.
Manganese,............................	2	"

Sea-weed, sand, dirt, &c. are very valuable, the first particularly, for its fertilizing qualities. Reference for an analysis of it was made to Thompson's Chemistry, vol. 4, page 298. It is found to contain eighteen different ingredients, according to M. de Chaubry, reported as above.

Dr. V. observed, that when manure collects about barn yards in puddles, the greater part of it is lost. Decomposition is always going on, and consequently the ammonia and carbonic acid so necessary to vegetation, are constantly passing off into the atmosphere.

To prevent this it is necessary to put sufficient ashes in the puddles as thick as mortar, and then add sufficient unslaked lime or sulphate of lime (Plaster of Paris) to bring the whole to a dry powder. This powder is then to be taken out and put into a dry place until it is wanted for use. As the puddle again collects it is to be treated in the same way. By this process you collect a large quantity of manure in a dry state, capable of being kept any length of time—the essence of which would otherwise be lost in the atmosphere.

Dr. D. P. Gardner, chairman of he committee on the analysation of soils, reported as follows:

REPORT.

Your committee beg to report the following propositions as the result of their careful consideration:

1st. That farmers who have stores of manures to apply to their lands, shall furnish a specimen of their lands to ascertain if it will be an economical addition.

2d. That those who have tracts of lands which they desire to improve, or which are deficient in fertility, will find it advantageous to learn by the analysis of specimens of soil from such tracts the appropriate amendments.

3d. That in introducing the culture of clover, &c., on lands which will not produce them, the most advisable method is to have an analysis of the land made specifically to learn what mineral matter is wanting.

4th. In submitting specimens for analysis, all information of a chemical nature should be sought from the analyser, and every condition of drainage, position, subsoil, &c., furnished with the specimens of soil.

5th. The specimen of soil should be an average from the field, and about 4 lbs. in weight to be forwarded to the Repository of the Institute.

6th. The analysis required is not quantitative, and should not cost more than from $2 to $5.

7th. We therefore recommend the members of the Farmers' Club, and all other persons interested in the advance of correct agriculture, to forward their specimens here for analysis.

8th. That the Farmers' Club recommend all specimens to be submitted to a competent chemist.

Yours respectfully,

D. P. GARDNER,
EDWARD CLARK, } *Committee.*

Gen. Clark moved that Dr. Gardner be appointed on behalf of the Club, to examine specimens of soils which shall be exhibited by farmers, and to report their chemical qualities. Unanimously adopted.

Mr. Wakeman presented a letter from Dr. Stebbens of Northampton, Mass., on the subject of Bark Silk, made from the fibres of the young Mulberry tree. The Doctor has learned from a French publication that it has been done in France, but the modus operandi is not described. He will be able this spring to report the effect of winter frost. Has tried boiling water, soaking, &c., but has not fully succeeded.

The French publication states as a fact that seedling mulberry leaves will feed nearly double the worms that leaves will from old trees—that the young leaves should be fed not only in the early stages of the worm, but the day before and after moulting—that it is not only curative but prevents disease. In China (he infers for this purpose) they renovate their mulberry trees every year. These are new ideas, and deserve investigation. Experiment will afford the only conclusive test.

Col. Clark thinks the mulberry bark may be macerated in steam, and if resin remains be purified by alcohol.

Mr. Smith presented a communication signed John O. Griscom, city inspector, addressed to the common council of this city, in relation to sinks, privies, cispools, &c. Ordered to lie over for next meeting's consideration.

The Club then adjourned. The next meeting will be on the third Tuesday of instant March, viz: 10th, at 12 o'clock, as usual at the Repository in the Park.

Subject—the culture of *the vine and Gooseberry*; with some unfinished matter in relation to *Manure.*

MEETING OF THE N. Y. FARMERS' CLUB.

American Institute, March 19, 1844.

Present, Forty-four members.

The Vice-President, General Chandler, in the chair.

Henry Meigs, Secretary.

The minutes of the last meeting were read and approved, after correcting an error in the statement relative to the Egyptian Wheat. The "REMARKS" apply to Egyptian Corn.

The Chairmain said, that the growth and manufacture of wool in the U. States had been made a subject of particular investigation by the American Institute, and a report might be expected. He believed all the objections to it, save its supposed interference with commerce, had vanished before the light of truth practically illustrated; and he could assure the meeting of his entire belief that the investigation alluded to would clearly show, that, if all the wool necessary for the consumption of the country was manufactured and grown within its limits, commerce would find a much greater amount of employment in bringing from abroad the dye stuffs and other materials which necessarily enter into its composition, than would be afforded in bringing the woollens if manufactured abroad.

Dr. Valentine compounded the materials forming artificial guano, in the presence of the club, (viz.) in the proportions of—nitrate of soda 20 pounds, sal ammonia 10, carbonate of ammonia 5, pearlash 5, sulphate of soda 8, sulphate of magnesia 5, pulverised bone 60, salt 10, sulphate of lime 2 bushels, meadow mud or street manure 1 cart load, carbonate of iron 2 drachms, manganese 2 drachms. Dr. Valentine asked for the reading of a statement, from the Transactions of the Highland Agricultural Society, as follows—

Effects of Soaking Seeds in Chemical Solutions.

"I steeped the seeds of the various specimens exhibited, in sulphate, nitrate, and muriate of ammonia, in nitrate of soda and potash, and in combinations of these; and in all cases the results were highly favorable. For example seeds of wheat steeped in sulphate of ammonia on the fifth of July, had by the 10th of August, tillered into nine, ten and eleven stems of nearly equal vigor; while seeds of the same sample, unsoaked and sown at the same time in the same soil, had not tillered into more than two, three and four stems. I prepared the various mixtures from the above specified salts exactly neutralized, and then added from 8 to 12 measures of water. The time of steeping varied from 50 to 94 hours, at a temperature of 60 degrees of Fahrenheit. I found, however, that barley does not succeed so well if steeped beyond 60 hours. Rye grass and other gramineous seeds, do with steeping from 16 to 20 hours, and clovers from 8 to 10, but not more; for being *bi-lobate*, they are apt to swell too much and burst. The very superior specimens of tall oats, averaging 160 grains on each stem, and 8 available stems for each seed, were prepared from sulphate of ammonia. The specimens of barley were prepared from nitrate of ammonia; they had an average of 34 grains in the ear. The other specimens of oats which were next the most prolific were from muriate of ammonia; and the promiscuous specimens of oats were from the nitrates of soda and potash—strong, numerous in stems, (some having not less than 52) but not so tall as either those from the sulphate or muriate of ammonia."

Dr. Valentine stated that Dr. Chilton had tried these experiments 15 years ago, with good success.

Commodore De Kay, from the committee to whom was referred the Treatise on the Horse by William Youatt, made a report which was read as follows: "This work has been edited, amended and adapted to the use and service of the United States, by J. S. Skinner, of Washington city. The committee have examined this work with much pleasure, having for a long time felt the want of something of the kind, which in an abridged form, would put our people in possession of all the required information on that subject without compelling them to wade through a mass of matter neither interesting, agreeable nor instructive. The compiler of the present work seems to have taken especial pains to lop off such excrescences as marred the beauty of the foreign work, and has substituted much useful and interesting matter which will no doubt be duly appreciated by the agricultural portion of our fellow citizens.

Your committee can hardly hope to do justice to this work without occupying too large a portion of the time of the club, and in confining themselves to a concise synopsis of its contents, which is believed to be the object of the reference, if they succeed in calling attention to the book, they believe more benefit will accrue than the most elaborate treatise would accomplish. The work commences with an introduction by Mr. Skinner, on the Horse in England and America, as he has been and as he is, &c., detailing the improvements of successive ages—the advantages derived from the crossing the breeds—climate—tables of the best racers—rules of the New-York

Jockey Club—extraordinary trotting, pacing, &c. with the size of trotting horses. At an early day the prices were far beyond the average value of farm horses. Your committee feel that the highest praise they can give this work is merited by it, and that it will long remain a standard, creditable to its author and compiler, and serviceable to the public."

Mr. Boswell made the following communication which was read, on the manuring of seeds.

MANURING THE SEED.

During the last year we have heard of the agriculturists of Germany producing the most luxuriant crops by manuring the seed instead of the soil.

For the first time we see published an account of the method in "The Journal of Agriculture of the Highland and Agricultural Society of Scotland."

It is taken from a German pamphlet from the pen of C. L. Victor, at Neiderholm in Hesse Darmstadt, and has been tried for five years on a large scale for the culture of wheat crops.

Substance employed.

1st. Blood, in the liquid state, is mixed with one eightieth of its weight of glauber salts, dissolved in a little water; when thus mixed it may be kept a long time in a cool place without congealing or undergoing decomposition; or clotted blood may be dried either alone or mixed with a little earth or powdered clay and then reduced to powder.

2d. Wool, hair, parings of leather, horns, hoofs and bones, are charred in close vessels until they are capable of being reduced to powder.

3d. The dung of animals is dried and reduced to powder.

4th. Fats and oils of all kinds are mixed with so much earth, clay, or rye meal, as will enable the whole to be reduced to powder. Oil cake is also powdered for use.

Mode of using them.

Make a semi-fluid mixture thus—for a bushel of wheat or other grain, take 20 to 30 pounds of clay in fine powder, 1¼ lb. pounded sal ammoniac or 3 lbs. common salt, 3 to 5 quarts whale or other cheap oil, 15 to 20 quarts fresh blood or blood kept in a fluid state by means of glauber salts, or in the absence of blood of as much water, 3 to 5 lbs. linseed meal or powdered oil cake.

These are mixed together intimately, and water added, if necessary to make a half fluid mixture. The seed is then to be poured in and stirred about till every seed is completely enveloped by the mixture.

A layer of one of the following dry mixtures is then spread on the floor; over it the manured seed, and then another layer of the dry powder. The whole is then stirred together and left to dry.

The dry mixtures

Are of six varieties—
No. 1. 75 lbs. powdered clay, 8 horn shavings, 17 bone dust.
2. 85 lbs. do. 15 fluid or 5 dried blood.
3. 85 lbs. do. 5 charred hair, 10 oil cake.
4. 60 lbs. do. 40 dried dung.
5. 70 lbs. do. 25 charred leather, 5 bone dust.
6. 80 lbs. do. 1 fat, tallow or oil, 2 powdered dung.

These are to be finely powdered and intimately mixed. The use of the clay is to make the other substances cohere together and attach them strongly to the grain.

Mr. Allen made the following communication on the subject of guano, which was read:

To the Secretary of the New-York Farmers' Club.

Sir,—I herewith transmit to you part of a bag of guano manure, recently received from the coast of Peru. Please to let it be divided among the members of the Club as you may think proper. I also with it transmit a paper on the subject of this manure, which if agreeable, I should be pleased to have read before the Club, as it embodies in a small compass nearly all that is essential in its history and use.

Very respectfully your ob't. servant,
A. B. ALLEN.

New-York, 19*th March*, 1844.

Guano Manure.

Since Mr. Teschemacher's valuable discovery, (an account of which appeared page 25 of the January No. of the Am. Agriculturist,) that corn grown by the application of guano contains 50 per cent more of the phosphates in it than that raised on the same land without guano, and that its product may be doubled on a poor soil by the use of a few dollars' worth of this powerful fertilizer per acre, considerable attention has been excited in regard to it by the farmers of this vicinity, and we have been called upon for further information as to its history and use. This has been obligingly furnished us by Mr. Bartlett, of this city, who resided some time in Peru, where the article abounds in the largest quantity, and in its purest state.

Guano is formed in strata from 1 foot to 60 feet deep, on most of the headlands and islands all along the Peruvian coast, from five degrees to twenty-five degrees south latitude, a distance of about 1,200 miles, and exists in such unbounded quantities, that it will require ages to transport it away. It is without doubt the pure excrements of sea-fowl, which harbor in this region in such immense flocks as to literally darken the air in their flight. It has a strong pungent smell, making it frequently excessively disagreeable to approach within two or three miles of its deposits. The Spaniards of South America have used it as manure for more than 300 years, particularly in their crops of maize; and the Peruvian Indians had done the same before them from time immemorial. The corn in Peru is first allowed to get up as high as twelve to fifteen inches, and then about half a handful (say three ounces,) is applied to each hill by scattering it round the stalks, and mixing it up well with the soil. About the same quantity is again used just before the corn commences forming the ear, and as it never rains in Peru, the hills are irrigated within twenty-four hours after each application of the guano. Land in many parts of Peru would yield little without guano; but with it the products are very abundant. Mr. Bartlett adds, that the corn grown there is the largest and finest he has ever seen in any country. G. G. Howland, Esq., of this city, applied it to strawberry and melon vines last year, in his garden at his summer residence at Flushing, with the best effect.

A company has purchased the exclusive right of exportation of guano from the coast of Peru, of the government there, having paid for the same $1,000,000. They have exported large quantities to England, of which 15 to 20,000 tons still remain in Liverpool alone, unsold. Our last accounts quote it at £9 to £10 per ton. At this price, expenses of transportation, &c., together with the United States duty of 20 per cent., it would come too high here for general use among our farmers. If our government would abolish the duty, and it could be had at a low rate of the Peruvian company, and be brought directly to our own ports, it might be afforded at such a price as we think would ensure its use in considerable quantities on the Atlantic borders. We hope that some of our enterprising shipping merchants will endeavor to accomplish so desirable an object as the cheap importation of it would prove to the country.

Guano varies considerably in analysis, for there are three kinds in Peru. The white is considered the most valuable, as being the freshest and purest. We have seen at least a dozen tables of analysis of it, but quote those only of Bertels and Volckel:

	BERTELS. Parts.	VOLCKEL. Parts.
Urate of ammonia,	32	90
Oxalate of ammonia,	134	106
" of Lime,	164	70
Phosphate of ammonia,	64	60
" " and magnesia,	42	26
Sulphate of potash,	42	55
" of soda,	11	38
Muriate of ammonia,	65	42
Phosphate of lime,	100	143
Sand and clay,	—	47
Phosphate of soda,	53	—
Alumina,	1	—
Residue (insoluble in acids,)	58	—
Waxy and resinous matters,	6	—
Carried forward,		

Brought forward, ...		
Common salt, ...	1	
Organic matter, traces of salts of iron and water, ...	—	323
Organic matter, free ammonia, and water,	227	—
	1,000	1,000

Johnstone found the sample to contain 303 parts out of 1,000 of common salt, and another sample 114 parts.

An analysis in Liverpool, furnished us by Mr. Howland, gives

Lithic acid, ...	15	per cent.
Bone dust,.........................	30	"
Ammonia, ...	15	"
Organic matter, ...	36½	"
Sundries, ...	3½	"
	100 parts.	

The English periodicals have been teeming with accounts of experiments with guano for the past five years; but as their climate and course of cropping are so entirely different from our own, we do not think it advisable to notice them further than by saying, that when properly applied in an unadulterated state, the results are highly satisfactory, and prove it superior to most other manures, and we have no doubt the same would follow in this country, particularly on poor soil. On rich land, or such as has been highly manured, the application of guano would be of little benefit. It suits alike, grass, grain, root crops, flowers, and shrubs; and owing to its great condensation of fertilizing substances in a small bulk, it is particularly valuable and convenient in the conservatory and garden.

Mr. Bartlett has been so obliging as to send us a bag of guano recently imported, and we shall take pleasure in furnishing any of our friends with a few pounds of it, who may be desirous of making experiments. It is so powerful a manure that it must be used in very moderate quantity, say from 100 to 200 lbs. per acre, otherwise it will kill the crop to which it is applied. We would recommend mixing it under cover from rain, in thin layers of earth, and after it has lain a short time, toss over the compost very minutely, and then apply it to the crops.

Dr. Underhill, of Croton Point: The culture of the grape is one of the subjects under discussion. I am wholly unused to public speaking. I do not recollect to have addressed an assembly before. I take a deep interest in the culture of the grape. It is now several years since I began to devote myself to it; I have made it my great object to establish its success in open field culture, from whence alone the great body of the people can be supplied with this delicious and salutary fruit. Great commendation is due to those who produce it in their hot-houses. Boston is distinguished for her success in this.

Her princely merchants have, under glass, by liberal and skilful means, produced delicious grapes. I wish that we had more of this fine taste displayed among ourselves; much is doing, however. But I had rather behold the hot-house palaces, than those of which we have such numbers for dwellings, in which we have such costly furniture. The sick and the convalescent, derive from this artificial culture, at high prices, however, often the only fruit which they can eat. They are enabled to eat the rich black Hamburgh and Chasselas, when they cannot touch any thing else. The Isabella grape can undoubtedly be cultivated at Boston in open air, and perhaps some others may be gradually made to acclimate themselves.

Our country residences on this island—some of which have been much troubled with fever and ague—will, by draining, be rendered delightful, and grapes may be cultivated in them all. We shall see before the lapse of many years, hundreds of thousands of pounds of delicious grapes produced in our vicinity. We have a climate in which we can produce as good grapes as any in the world. They are *improving in quality every year.* They improve as animals do, by cultivation. And we have a great advantage over the grapes of the old world in our native grapes. Their vines have been pruned for two thousand years. They have lost their vigor. Ours are new and vigorous. Our hot days and cool nights are too strong for the European grape. I have tried them in open culture, and they become poorer every year.

Our Catawba grape may fail once in three or four years, but it will eventually be established in our latitude. I intend to visit the old Catawba vine which was set in Brooklyn about forty years ago, from which we are cultivating descendants. The old Isabella stock is also there—brought there fifteen or twenty years before the Catawba. I want to see the *old pippin tree of Newtown*, on Long-Island, father of an invaluable race.

The grape is of great value to our country. Wine is indispensable on many occasions for the sick—in its purity, to the church—and as St. Paul says, "*a little for old age.*" All fine fruits, as well as grapes, should be most carefully and abundantly produced in our country. Many of us have been discouraged by failures in trying to introduce European grapes. Parmentier, in 1829, thought he could make them flourish here. I tried four acres of them. In 1832, I gave up the Europeans, and commenced with the Isabella. I now have seventeen acres of them, and three acres of Catawbas. In 25 years my vineyard will attain its best condition, and it will continue good, with no heavy charges for its preservation, for 75 years beyond that. *The grape lives well for an hundred years.* There are many citizens who know more of the grape than I do. Some of them are enthusiastic on that subject. I glory in being enthusiastic upon it. Our people consume too large portions of animal food. It renders our blood too thick. It causes diseases of the heart, liver, and lungs. Pure wine and fruit dilute the blood, and cause it to pass with the necessary ease through the infinitely minute vessels of the body. Not one butcher in twenty dies a natural death. They suffer from violent inflammations, palsy, and apoplexy. I am a physician, and I do not recollect a butcher, in fifteen years of my practice, who died *what I term* a natural death. I have told them this. They eat meat three times a day. They must eat more fruit. They suffer also from chronic diseases, produced by eating too much animal food. When I have found them with their systems deranged—seeing all nature in dismal, false colors—out of humor—I told them to leave their meat, and eat vegetables and fruit.

It is not altogether the climate which renders Frenchmen vivacious as they are. It is their diet—vegetables and a little pure wine.

The heat in England is not strong enough to penetrate the soil deeply. They plant shallow, therefore. I plant my vines deep. Most of our planting must be so. The vine roots run great lengths for their supplies, a great many feet. Our city pruning is bad. I prefer what is termed *long pruning* to *spur pruning*. I grow my grapes on last year's growth of wood. I give them considerable length. I prune in March, and as late as the beginning of April. Bleeding does no injury to the vine or grape. I have tried that well. I train my vines six feet high, five feet apart in the rows, and the rows are six feet apart. I train them on wires fastened to the posts. I prune always so as to grow my fruit on the wood which *grew the last year*. That branch I take special care of. I *cut out* that branch which *bore fruit the last year*. I also rub off certain of the shoots from the buds, so that there shall not be too much fruit to render the whole less perfect. By this I get not only better grapes, but in fact, more of them. In our city vines, we leave ten times too much vine and fruit on the stems. I am now trying experiments on a variety of grapes, and in due time I will give the results. Any dry situation will produce grapes. The vines ought not to stand in wet locations. France, in 1830, raised one hundred and fifty millions of dollars worth of grapes! I say to you with confidence, from the knowledge which I possess, that we can raise nearly *double the quantity of grapes on an acre that France does, or Germany does, on an average of years.*

I prefer planting my vines in the spring—but for the Isabella, spring or fall will do. The pulp in our grapes is lessening every year. Five years ago, the French, Spaniards, and Italians here would not eat our grapes—now they begin to relish them. The matter of our grape is enclosed in a capsule; the Madeira grape is cellular in its structure. There is some art in eating grapes. Some persons do not know how to do it well.

Townsend Hilliard, of Philadelphia, made a written communication on the grape, chiefly as to a worm which attacks the root of the vine. It was read follows:

Culture of the Grape.

Philadelphia, 3d *month*, 16*th*, 1844.

To T. B. Wakeman,
Corresponding Secretary American Institute, New-York.

I received your communication of the 19th of 1st month, and regret that unavoidable engagements have prevented me from answering it sooner.

You first request, "an account of my grape culture." I shall answer by referring to Clement Hoare's Treatise on the Vine. The system of culture, as there laid down, I hold to be the best, and have adopted it as my guide in the management of my vines for severel years past, at first with unusual success: but my success was of short duration, for from some cause, just as my vines had arrived to an age when they ought to have produced fruit, they would generally die in the following winter, or bear one or two crops and then get sickly, and finally die by piece-meal, or grow less and less, until nothing but half dead stalks were left.

Now for the cause. It is the worm at the root. I have long differed from the prevailing opinion that a hard winter or changeable spring was the cause of the death of our grape vines, provided they were in good health in the fall. But I was unable to see any other well grounded cause until about four years ago. I had occasion to move a young vine of the Sweet-water family, in the third year of its age—and on digging it up, I found its roots had been attacked by some insect or worm, whose depredations were similar to those of the peach grub, except instead of being damaged a short distance beneath the ground, it extended to the end of the roots. This I thought explained the cause why our vines would not stand our winter, and induced me immediately to examine some other and older ones which had been in bearing, and some of which were dead, and others on the road to death. All had been attacked in the same manner, but to a greater extent. In some, the bark of the roots was completely eaten off, and left no channel for the sap to flow. This and other examinations convinced me beyond a doubt, that the ravages of this enemy is the cause in reality of the failure in cultivating this delicious fruit, both foreign and native; for I have found it to attack our hardiest native also, although if in favorable soil, being of more vigorous growth, they seldom kill them entirely for some years.

My opinion is, that unless we can discover a remedy or preventive, in vain will be all our attempts at growing the vine.

I am not so well satisfied as to the name and nature of this enemy. My firm opinion is, that it is the centipede, or hundred-leg worm. But as some gentlemen, eminent in horticulture, with whom I have conversed, think otherwise, I am willing to have it further tested, hoping that in time some one will have the good fortune to discover not only the real and certain character of this formidable enemy, but also the remedy that will prevent its ravages without injury to the vine. When this is attained, I will guarantee the growth of grapes of every color and of every clime.

I remain, respectfully, your friend,
TOWNSEND HILLIARD.

Dr. Underhill—I have never suffered in my vines from worm at the root. All weak, old, enfeebled plants and trees become victims of vermin. They pounce upon such sickly subjects, *but never attack a healthy and vigorous one.* I open the ground at proper times around the roots of mine. This is a useful operation.

Mr. Brown—The worm denominated the *thousand legs* attacks decayed wood only.

Mr. Boswell—Mr. Hilliard is cultivating thirty varieties of grape, chiefly foreign.

Dr Underhill—The great and sudden changes in our climate are unfriendly to foreign vines. Large sums of money have been vainly expended here in planting foreign vines. They will do well under glass, but not in open culture. When I began to send grapes to market, I was told that I would soon overstock the market. There is no danger of that. Did you ever see, or did you ever hear of a man that would not eat grapes? I have seen *one*, and he had been eating wild, unripe ones, and hated them. I could have sold my grapes always *before they were ripe* at twelve or fifteen cents a pound. People would have them early. I would not let them have them, and so *I have sold them to the people ripe at five cents the pound! I choose to suffer in pocket rather than make children sick.* This eating of them unripe caused a prejudice against them. In the South of France they have no complaints of the liver. They attribute this to their universal use of grapes and fruit generally.

It is now easier to sell at double prices fifteen times the quantity of grapes than it was a little time ago. This city would eat a million pounds a year if they had good ones. Paris eats off the table ten millions of pounds a year.

Mr. Carter—Let the grape and gooseberry be continued in discussion at the next meeting. Carried.

Dr. Valentine—Guano is manufactured in England as good as the genuine article, and we can make it here.

Mr. Carter moved that the subject of the health of our Island be discussed, and its relation to our agriculture.

Mr. Wakeman—Let pruning be a subject for our next meeting. Carried.

Charles Morrill puts the following question in writing to the Club: Why will pork spoil when slaughtered and exposed to severe freezing weather?

Isaac Rogers exhibits to the Club, Hoover's machine for cutting and grinding corn-stalks and other vegetables for the use of cattle.

Mr. Livingston moves the thanks of the Club to Dr. Valentine for his exhibition of the compounding of artificial guano. Carried.

Mr. Wakeman moves that the Club adjourn to Tuesday next, to take up much unfinished business. Carried. Adjourned.

H. MEIGS, *Secr'y.*

Communication from B. G. Boswell on the Cultivation of Fruit.

SOIL.—The hard gravelly soil of the eastern states, the sandy soil of New Jersey, the clay soil of Pennsylvania, and the rich alluvial bottoms of the west, all produce an abundance of the different varieties of fruit when proper attention is given to the trees. Mr. Phinney, of Lexington, Massachusetts, has ditched and drained one of his swamps, and has now on it a luxuriant orchard of apple-trees. *The great point is to have a dry soil.* If it is not sufficiently rich, make it so; no man should *expect* to have *fine* crops of anything unless his soil is rich.

SETTING OUT TREES.—If by exposure the roots have become dry, immerse them in water 20 or 30 hours previous to setting them out. Prepare a compost as follows: take 3 bushels of rich soil, or 3 bushels of swamp muck would be better, 1 bushel night soil, 1 bushel fine charcoal, (if charcoal is plenty 3 to 4 bushels is to be preferred,) 1 bushel slaked lime, 1 bushel of unleached, or 2 bushels of leached wood ashes, and 1 peck of salt. Mix the above well together.

Dig the holes three feet across and two feet deep, keeping the top soil by itself; fill in a portion of the bottom soil until nearly ready for the tree, then fill in half a bushel of the compost, and set in the tree, spreading out the roots to their natural position, and fill in the top soil, gently shaking the tree two or three times to settle the soil around the roots. The tree should be set the same depth in the orchard that it stood in the nursery. Leave the soil a little hollowing about the tree to catch and retain the rain-water. Put around each tree half a peck of fine charcoal, and half a peck of slaked lime. With these precautions, neither peach nor any other fruit-trees will be infested with worms at the roots, provided they have suitable after-culture. For many of the above suggestions, the writer is indebted to R. L. Pell, Esq., of Pelham, Ulster Co., N. Y.

CULTURE OF ORCHARDS.—The soil around the trees should be kept loose, either by spading, digging with a mattock, or by plowing. If a crop is put in the orchard, nothing should be planted or sowed within five feet of the trees, as the nourishment taken up by the crop is so much taken from the growth of the trees. After the lime and charcoal has been around the trees for one year, spread it around the trees in a circle of ten feet in diameter. This should be done in the spring, when the soil is cultivated, and a fresh supply of lime and charcoal applied.

When the trees have been set out three or four years, the soil should be enriched with a compost of manure, swamp muck and ashes. Early every spring the trunks of the trees should be washed with strong ley, strong soap-suds, or thin soft soap. Apply either of these with a whitewash brush as high as man can reach. When the trees grow rapidly, their growth will be increased by slitting the outer bark the whole length from the ground up to the limbs. This gives the trees room to expand. As soon as the trees blossom, throw over them lime perfectly slaked—this should be done while the dew is on.

TO RENDER OLD AND BARREN ORCHARDS THRIFTY AND PRODUCTIVE.—Early in the spring plough the entire orchard, and enrich with a compost of manure, swamp muck, lime, and chip manure. Scrape off all the old bark with a deck-scraper, or a hoe, ground sharp. Apply half a bushel slaked lime, and the same of fine charcoal around each tree. Apply then soft soap or strong soap-suds on the trunks and limbs as high as a man can reach. While the trees are in full bloom, throw over them a good supply of fine slaked lime.

TO DESTROY CATERPILLARS.

As soon as the nests can be seen, procure some pure spirits of ammonia, tie a small piece of sponge to a pole that is long enough to reach the highest nests, fill the sponge with ammonia, and once filling will be sufficient to rub off and destroy from thirty to forty nests.

CURCULIO.

This destructive insect, in some portions of the country, has destroyed the cultivation of the plum and apricot. Among the preventives tried, for the last forty years, there seems to be but one that proves successful. Where there is but one or two trees, the diseased fruit may be picked up daily and destroyed. Where there is an orchard of plum trees, put in a sufficient number of hogs to eat all the diseased fruit as it falls to the ground; otherwise, the worms in the fruit attain their growth, go into the soil, and the following season appear as a winged beetle, ready again to deposit its eggs in the small fruit, and thus perpetuate its species from year to year. By destroying the diseased fruit, the whole race of the Curculio is destroyed.

PRUNING.

The best time for pruning is when trees are in bloom, or even when in full leaf. The wounds made by cutting off the small limbs will heal over by the oozing out of the sap. The wounds made by cutting off the large limbs should be painted with any common paint, to keep the wood from the weather. As a general rule, those limbs should be cut off that cross other limbs. When young apple and pear trees grow very thrifty, they will sometimes get too tall; in such cases, they should be headed down by cutting off a portion of the tops. The most successful cultivators of the peach, never trim their trees after they are taken from the nursery.

The Cranberry.

This delicious fruit is coming into such general use, and is becoming so important an article of export, and so much interest is now taken in its cultivation, that I propose giving a concise account of the same, and its general history.

The common American cranberry (*oxycoccus macrocarpus*,) is found growing in a wild state in swampy soils, in the eastern, middle and western States. The first account we have of the cultivation of this fruit, is by the late Sir Joseph Banks, who, in 1813, produced from a bed eighteen feet square, three and one-half Winchester bushels; being at the rate of 460 bushels to the acre. Capt. Henry Hall, of Barnstable, Mass., has cultivated this fruit for the last twenty years. His method is, to spread on his swampy ground a quantity of sand—this is to kill the grass; but where sand is not at hand, gravel will answer the same purpose. He then digs holes four feet apart each way, and puts in the holes sods of cranberry-plants about one foot square.

As this plant naturally grows in a very wet soil, it is generally supposed it will not thrive in a dry soil; but this idea is erroneous. Mr. Sullivan Bates, of Billingham, Mass., has cultivated the cranberry on a dry soil for several years with the utmost success—having produced three hundred bushels to the acre on several acres, and his fruit double the usual size. His method is, to plough the land, spread on a quantity of swamp muck, and after harrowing the soil thoroughly set out the plants in drills twenty inches apart; hoeing them the first season. After this, no cultivation is needed. By both the above methods, the plants will cover the ground in three years.

From my own knowledge of the cranberry for the last thirty years, should I design commencing the cultivation of this fruit on an extensive scale, I would try it on both swampy and dry soils. I would drain the swampy soil, plough it as early as possible in the spring, and set out the plants on the plan of Mr. Bates.

To show the rapidity with which cranberry plants increase, I will add this statement, from an English book on fruits. An English gentleman had only a few plants, these he cut in small pieces or cuttings, and set them out in a green-house. In the spring, he prepared some swampy ground by spading it twelve inches deep. In a bed 150 feet long, and four feet wide, he set out seventy-five cuttings in one drill through the length of the bed, putting the cuttings two feet apart in the drill, and yet in three years the plants completely covered the ground.

In Massachusetts, the cranberry crop is once in a few years cut off by the late spring frosts. This may be prevented where a meadow is so situated as to be flowed. The water should not be over one or two inches deep on the cranberries, nor be left on later than the last of May in this climate. If kept on until it becomes warm it will kill the vines. Perhaps the best management would be something as they flood the rice fields at the south, or water meadows in England—let the water on while the weather is coldest, and then take it off as it moderates. Sometimes, in the eastern States, the cranberries are destroyed by a frost in September; where water is convenient and plenty, the meadow should be flowed on cold nights at this season, as well as in the spring.

Previous to shipping cranberries, they should be run over a platform slightly inclined. The rotten and bruised fruit will not run off, but stick going down the platform, and are scraped off and thrown away. The perfect fruit is then put into tight barrels and when headed up filled with water, and in this manner they arrive in Europe, in perfect order, and have frequently sold in foreign ports at twenty dollars per barrel.

Rakes are now made for the express purpose of gathering cranberries, and although these rakes tear the vines somewhat, yet the crop is not diminished by raking; on the contrary, it has been increased. Some years ago, a gentleman in Massachusetts commenced raking his little patch of one-fourth of an acre. The first year it produced twelve bushels, the next eighteen, the third twenty-five, and so on till his last harvest, when the crop amounted to sixty-five bushels. This increase is easily accounted for by the method of gathering with rakes—the pulling up a few of the vines loosens the ground, and although not intended, yet in fact the raking acts as a partial cultivation.

To promote the cultivation of this fruit, the American Institute is making arrangements to supply horticulturists with plants early in the spring, in either large or small quantities; and I would recommend those wishing to purchase, in this vicinity, or New-York, to get their supplies in this way.

RASPBERRIES.

When a small bed is put out for family use, prepare the ground by spading—if a field for market, plough and subsoil plough the land—enrich with decayed leaves or well rotted stable manure—but a good compost is preferable, similar to the one described for setting out fruit trees.

Early in the spring, just as vegetation commences, strike out furrows with a plough, four feet apart, and set out the plants, ten inches apart, in the furrows. Cultivate with a small harrow or cultivator, and thus keep the ground loose and free from weeds or grass. Early each spring, cut out all the old wood. As a market fruit, there is no variety of raspberries equal to the Red Antwerp.

STRAWBERRIES.

We never knew two persons who cultivated this fruit exactly alike. If a small bed is put out, it should be done by setting out early in the spring, or in September or October—single plants, eighteen inches apart each way. In the fall, cover the whole surface of the soil with decayed leaves, (if to be had, and if not,) with well rotted manure, one inch deep. The following spring, spade the ground between the hills four or five inches deep with a narrow spade, and then cover the soil with saw-dust or tanners bark, one inch deep. When the fruit is cultivated on a large scale for market, it is better to set the plants in drills twenty-four inches apart, and the plants in the drills twelve inches apart, and cultivate the same as in hills.

CURRANTS.

In putting out currant plants, select those shoots of a previous year's growth—cut out all the eyes except three for producing bearing branches—having made the soil mellow, set out the plants by sticking them down in the ground four or five inches deep, in rows four feet apart, and fifteen to eighteen inches apart in the rows. Keep the plants trimmed as trees, and the fruit will be much improved in size and quality. Enrich with leached ashes, or any good compost.

GOOSEBERRIES

Should be cultivated in a similar manner to currants. Enrich the soil with a compost made of swamp muck, lime and fine charcoal dust; this should be well rotted, and will prevent blight and mildew.

QUINCES.

The pear, orange, and Portugal varieties, are generally considered the finest sorts for extensive cultivation.

THE GRAPE.

The cultivation of grapes, both as a dessert fruit and for manufacturing wine, is attracting so much attention that the most approved method of putting out vineyards is here given. The soil should be warm, dry and rich. Prepare it by ploughing and subsoil ploughing to the depth of fourteen to eighteen inches. Strike out furrows eight feet apart. Set out the vines six feet apart in the furrows. The vines should not be taken from the nursery till two years old—or the cuttings may be put into the vineyard in the first instance. Enrich by mixing with the soil around each root one quart of fine bone dust, and two quarts of bones partially pounded. Another excellent manure is the offals of fish; or where the menhaden, (or mossbunkers, as they are sometimes called,) or where herrings are plenty and cheap, the whole fish can be used, putting about half a peck around each vine, and under the surface. In putting out trellis, take locust or cedar posts eight feet long; at distances of ten feet apart, insert the posts two feet deep. Put a strong nail near the top of the posts, another three feet from the ground, and another midway between the two. Take strong iron wire, No. 11, (one degree soft is best,) fasten it firmly when starting, and then make one turn round each nail, and so on till the trellis is finished. This makes a firm trellis, and at as small an expense as any other method. The air, so necessary to the perfection of fruit, has a free circulation, and the wire is the most convenient of all contrivances for the small tendrils to attach themselves.

Preserving Fruit through the Winter.

All winter fruit should be gathered by hand, and taken to an open barn, shed, or other out-door building, where they should be carefully spread out, not more than seven or eight inches deep, where the fruit will go through an operation of sweating. When they have become dry, put them in dry clean flour barrels, or any clean casks. When put in cellars, in large quantities, the cellar should be opened in moderate weather, every few days.

To keep apples with success, it is only necessary, not to keep them too warm—on the contrary, keep as cool as may be, without danger of freezing. Should any person wish to keep a few choice Newtown pippins during the whole summer, put them in barrels, packed in perfectly dry sand, and keep as above.

Exportation of Fruit.

In my opinion, the importance of growing fruit, as an article of export, has been most generally overlooked in this country. It is true the fruit dealers of Boston have been shipping apples and cranberries to Europe for many years; and of late, apples have been shipped to Calcutta. There is no doubt that quinces, and the finest quality of winter pears, could be shipped to some parts of Europe with the same success as our other fruits. The business being new in this section of the country, I propose saying something relating to the export of fruit, for the benefit of new beginners.

All fruits sent abroad should be of the *very first quality*. The Boston dealers ship their celebrated Baldwin apples. The most valuable variety in this vicinity, is the Newtown pippins, as they keep sound, and retain their flavor late in the spring, when most other varieties are gone. A distinguished horticulturist of New York, ships his apples to London in the following manner: After being carefully picked by hand, and placed in baskets, they are carried by men and put in an open barn, for the purpose of sweating 15 or 20 days. Some are then packed in barrels with perfectly dry sand, some in buckwheat, and others are put in barrels without any thing with them. They are then taken on a sled, or in the box of a wagon, hung with eliptic springs, to a boat on the North river, and thence to the vessel which takes them to London. In all these transhipments, the barrels are never rolled, jolted, or jarred, so that the apples escape bruising, and the consequence is, they arrive in London in far better order than they are in general, when brought to the New-York market.

These precautions in shipping apples, agree perfectly with some facts I obtained from Mr. Serrell of the American Institute, formerly engaged as a managing ship owner in London, connected with the fruit trade. In drawing charter parties for a vessel to take fresh fruits from Spain and Portugal to London, a special clause is inserted that the boxes of oranges shall be hoisted into the vessel, by the tackle being attached to each; and that the boxes also are to be stowed on their bottoms, and never on their sides or ends. On landing in London, the same care is taken in hoisting them out of the vessel. The boxes are then placed on the heads of men known as fruit porters, and by them carried to the warehouse, where they are examined and assorted, and then sent out in the same manner, to the places of consumption. The same precautions are used in taking the oranges from the garden to the shore, from the shore to the lighter, and from the lighter to the vessel.

The Boston fruit dealers, when shipping cranberries to New Orleans or Europe, assort them by letting them run over a platform slightly inclined. Only the perfect fruit runs over the whole length of the platform, the rotten and bruised fruit lodge going down, and are thrown away. The choice fruit is then put in tight barrels, and when headed up, filled with water. The fruit will arrive at its destination in perfect order, and has frequently been sold in England and France, at $20 per barrel.

CHOICE FRUIT.

A farmer finds few things in life more difficult and perplexing than to make his selection of fruit trees from a nursery containing several hundred varieties of fruit. .To obviate this difficulty, I propose giving a list and short description of such as will give satisfaction to purchasers. I give the name best known in italics, but when there are several names for the same fruit, I give the synonymes in roman characters.

Apples.

Early Harvest, Prince's Yellow Harvest, July Pippin—Fruit medium size; bright straw color; flavor fine; ripe in July and August.

Early Red Juneating, Red Margaret, Strawberry.—Rather small; very rich and fine—ripe in August.

Summer Queen, Early Queen.—Fruit large and oblong; striped with red on a yellow ground; high flavored and fine—ripe in August.

Summer Pearmain, American Summer Pearmain, Early Summer Pearmain.—Too well known to need any description—ripe in August.

Porter Apple.—This is a new variety that originated on the farm of Rev. S. Porter, Sherburn, Massachusetts. Fruit large; oblong shape; skin bright yellow, with a red blush—ripe in October, and commands the highest price in the Boston market

Fall Pippin, Golden Pippin, Holland Pippin, Cobbitt's Fall Pippin, Vandine.—Of all fall apples this stands at the head of the list. Fruit large and of a roundish oblong form; skin smooth and yellowish green, tinged with orange; flesh tender, with rich juice—ripe in October, and keeps till January and February.

Seek-no-further, Rambo, or Romanite.—This fruit is much cultivated about Philadelphia. Shape flat, resembling the Vanderveere, but is better fruit; skin pale yellow, streaked with red; flesh tender and sprightly during the fall—is both a fall and winter apple.

Stroat, Straut.—A fine fall apple, introduced by the late Judge Buel, of Albany—in use from September to December.

Esopus Spitzenburgh.—Fruit large and oval shape; color red, covered with light yellow spots; flesh of the finest flavor for dessert and cooking, and keeps till February.

Baldwin, Baldwin Pippin.—In the Boston market this fruit has long brought the highest prices. Color bright red, tinged with yellow; flesh juicy, rich, sweet, and most agreeable flavor—ripe in November and keeps till March.

Belleflower.—A beautiful fruit, long celebrated about Philadelphia as their finest winter fruit—ripe in October, and keeps till March.

Blue Pearmain.—A well known fruit about Boston. Large size; color red, covered with a blue bloom; flavor delicious, and keeps till January.

Hubbardston Nonesuch.—A most popular new fruit lately brought out in Massachusetts, often commanding $5 per barrel in the Boston market—ripe in November, keeps till February.

Maiden's Blush.—One of the handsomest fruits in the country. Size large, roundish shape; skin pale greenish yellow, tinged with a blush; excellent for table use or cooking—ripe in August and September.

Lady Apple, Pomme d'Api.—Fruit small; of pale yellow color, deeply tinged with red on one side; flesh crisp and pleasant—ripe in November, and keeps till April.

Monstrous Pippin, Gloria Mundi, Ox Apple.—Fruit of enormous size, sometimes weighing 28 ounces; of pale yellowish green color; sprightly flavor—ripe in October, and keeps till January.

Newtown Pippin.—Of this most valuable apple there are two varieties, the yellow and the green; no difference in quality; keeps till May and retains its flavor—the most valuable variety for shipping to Europe.

Rhode Island Greening.—Fruit large; skin greenish yellow; flesh slightly acid and of fine flavor; keeps from November till April.

Roxbury Russett, Boston Russet, New-England Russet.—Has long been known about Boston; size medium; fine yellow russet color; flesh rich, juicy, sub-acid; and keeps till June.

Swaar Apple.—A celebrated winter fruit in some parts of New-York; of fine flavor; skin greenish yellow, tinged with a blush—keeps till March.

Wine Apple, Hay's Winter, Large Winter Red, Fine Winter.—A beautiful fruit highly esteemed in the Philadelphia market—keeps till February.

Hollow-core Pippin.—A new variety, raised in Jefferson county, Ohio. It resembles the yellow Newtown Pippin in its fine flavor—keeps till April and May.

Ohio Pearmain.—A new and beautiful variety in Ohio; good size; striped red and yellow; quality excellent—keeps till May.

Harrison and Camfield.—Both long raised in the neighborhood of Newark, New-Jersey, and *Hugh's Virginia Crab*, much cultivated in Pennsylvania and Ohio, are decidedly the most valuable varieties for cider to be found in the country.

In the west and other portions of our widely extended country, many new varieties of choice apples are constantly coming into use. The above are varieties found at most of the nurseries in the eastern states.

PEACHES.

The following varieties of peaches, are those principally cultivated by the peach-growers of New-Jersey and Delaware, for the markets of Philadelphia and New-York. They furnish a succession of fruit for ten or twelve weeks.

Troth's Early Red.—The finest of all early peaches—ripe in August.

Red Cheek Rareripe.—One of the best peaches cultivated in the country; size large; flesh rich, juicy and delicious—ripe in September.

Early York, Early Red Rareripe, Early York Rareripe.—Size medium; color rich red; flesh juicy and luscious—ripe early in August.

Morris Red, Gross Mignonne.—Fruit large; skin greenish yellow, with a blush; flesh melting and delicious—ripe in September.

Morris White, White Rareripe, Lady Ann Stewart.—Fruit large; form rather oval; skin yellowish white; flesh white, rich, juicy and sweet—ripe in September.

Yellow Rareripe, Yellow and Red Rareripe, Large Yellow Nutmeg.—Skin yellow and red; flesh firm, rich and delicious—ripe in August and September.

Large White Rareripe.—As its name denotes, a large white fruit—ripe last of September.

Red Cheek Melacaton.—Fruit large; form oval; skin yellow, with red cheek, flesh rich, mellow, juicy and luscious—ripe in September.

Oldmixon Freestone.—Fruit large; skin white, with a blush; flesh juicy, melting, rich, and luscious—ripe in August.

Smock's Freestone.—Some specimens of this fruit have measured 12 inches in circumference; shape oblong; skin yellow and dark red; flesh yellow, rich, melting and delicious—ripe in October.

Freestone Heath.—Fruit large, oblong and beautiful; color yellowish green, crimson next the sun; flesh rich, juicy and vinous—ripe in September and October.

Late Heath Cling.—Fruit very large; oval form; skin downy, nearly all white; flesh rich, and high flavored, tender and juicy—ripe in October.

Oldmixon Cling.—This is considered the finest of all clingstones; skin yellow, with a bright red cheek; flesh rich, juicy, sweet, and high flavored—ripe in September.

Lemon Cling, Kennedy's Carolina, Pineapple Clingstone.—Size large; shape oval; skin yellow, with a blush; flesh firm and rich; some have weighed 12 ounces each—ripe in September.

Rodman's Cling.—Size large; of apale yellow color, with a blush on one side; flesh juicy, vinous, and delicious—ripe last of September.

Eastburn's Choice.—A new and valuable variety; fruit large and nearly round; skin pale yellow, with a red blush; flesh yellowish white; juice pleasant and sprightly—ripe in October.

Tippecanoe.—A new and splendid variety, which takes the first rank at the Pennsylvania horticultural exhibitions. Size large; color beautiful yellow with a red blush; flesh yellow, firm and juicy—ripe in October.

Columbia.—Fruit medium size; skin rough and thin; color dull red; flesh yellow and fibrous, similar to a pineapple, juicy and rich—ripe in Septembor.

Crawford's late Melacaton.—Fruit very large and round; skin yellow and red; flesh yellow, juicy and sweet, with an agreeable acidity—ripe in September and October.

Many of the above peaches are cultivated in different sections of the country under different names. There are also many new seedling varieties in different parts of the country of excellent quality, but are not known out of their immediate vicinity. It is to be hoped that the general interchange of scions lately established by the American Institute, will assist to bring into notice the choice varieties of fruit from distant portions of the Union.

PEARS.

When some of our nurserymen offer from three to four hundred varieties of pear trees, it must, to a new beginner, and one entirely unacquainted with the different varieties of fruit, be a most difficult undertaking to make a selection. The present object is to give a list of such as will bring a succession of fruit, and are well known varieties.

Beurré d'Amanlis.—Size large; color green, changing to yellow, with a blush; flesh melting, juicy, and excellent—ripe in August and September.

Bloodgood.—A large fruit, of a dull yellow color, covered with dark russet spots; quality excellent—ripe in August.

Crawford.—Size medium; skin light yellow; flesh tender, juicy, and good—ripe in August

Dearborn's Seedling.—Fruit medium size; skin smooth, thin and green, with russet spots; flesh melting and of fine flavor; ripe in August.

Jargonelle.—Fruit large; pale green color, a little marked with red; flesh melting, juicy, with a slight acid; rich and fine flavor; ripe in August; the tree a productive bearer.

Stevens' Genesee Pear.—A new American variety of large size; color mellow green; flesh white, juicy, and melting; flavor excellent; ripe in October.

Bartlett, William's Bonchretien, Autumn Superb.—One of the most superb varieties; color tinged with red; flesh very melting and delicate; juice, perfumed, sweet, and abundant; ripe early in September.

Belle Lucrative.—A beautiful Flemish fruit; skin yellow, with a slight blush; flesh melting and juicy; ripe in October.

Bleeker's Meadow, Large Seckle.—Skin yellow, tinged with dull red; flesh melting, juicy, and delicious; ripe in November, and keeps till January.

Brown Beurré.—Fruit large; greenish yellow and dark red color; flesh melting, buttery, and excellent; ripe in October and November.

Cushing.—Skin light yellow, mottled with dull red on one side; flesh melting, white and sprightly; ripe in September and October.

Dix.—Large yellow fruit, with a blush; flesh melting and excellent; ripe in October.

Harvard.—Fruit of good size; skin russetty yellow, tinged with red; flesh juicy, melting and excellent; ripe in September and October.

Marie Louise.—A splendid fruit; skin yellowish green and cinnamon colored russet; flesh melting and rich; ripe in October and November.

Seckle.—This is considered by many the finest variety in this country; color from yellowish to brownish russet; red next the sun; flesh juicy, melting, spicy, and very superior flavor; tree an abundant bearer; ripe in September and October.

Virgalieu, Butter Pear of Pennsylvania, St. Michael of Massachusetts, and has thirty other names in different parts of the world. Fruit middling size; skin pale, citron yellow; with cinnamon russet, speckled; flesh white, juicy, buttery, and delicious; ripe in September and October.

Beurré d'Aremberg.—Fruit large; flesh rich, melting, juicy, and high flavored, and keeps till March; the tree a great bearer.

Columbia.—An excellent native fruit; size large; fine yellow color, tinged with red; flesh rich, juicy, and excellent; ripe in November, and keeps till January.

Easter Beurré.—Fruit large; color green, but yellow at maturity; flesh yellowish white, buttery and melting, and very highly flavored; eatable in November, and keeps till May.

Pound Pear.—Fruit very large; has weighed 33 ounces; skin rough, covered with dull russet; excellent for baking or stewing in winter.

Surpasse Virgalieu.—Fruit large, and nearly round; skin yellow, with a light blush; flesh rich, juicy and delicious; tree an excellent bearer; ripe in October and November.

Vicar of Wakefield, Monsieur Le Cure.—Fruit large; skin russetty yellow; flesh rich, sweet and excellent; in eating from December till February.

There are many other valuable varieties, and those who wish for large assortments, will find very full descriptions of fine fruits in the late edition of Bridgeman's Young Gardener's Assistant.

CHERRIES.

Downer's Late Red, Downer's Favorite.—Fruit large and round; color light red; flesh firm and fine—ripe after most other varieties are gone.

Kentish, Early Kentish, Long Stem, Montmorency.—Fruit round; skin red; flesh acid, juicy and abundant: fine for cooking: ripe in July.

May Duke, Early Duke, Holman's Duke, June Duke.—Fruit roundish and grows in clusters: skin very dark red: flesh soft and juicy: ripe in June.

American Amber, Early Amber, New Honey.—Fruit beautiful, and of medium size: dark pink or amber color: flesh rich, sweet and fine; ripe in June.

American Heart, Arden's White Heart.—Color pale yellowish; flesh tender and palatable: ripe in June.

Manning's Black Bigarreau.—A new variety from the nursery of the late R. Manning, of Salem, Massachusetts. Fruit large; flesh sweet and of peculiar fine flavor: ripe in July.

Yellow Spanish, Graffion, Imperial, White Orleans, Turkey Bigarreau.—Fruit very large; heart-shaped; amber color, red next the sun; flesh firm, sweet and high flavored: one of the very best varieties; tree an abundant bearer: ripe in July.

Ox Heart, Harrison's Heart, White Bigarreau.—Fruit large; heart shaped; color pale yellow and white, mottled with red; flesh white, firm, and well flavored—ripe in June.

Black Eagle—a handsome variety; fruit of globular form; skin dark purple; flesh tender, rich, and of fine flavor—ripe in July.

Black Tartarian, Black Russian, Ronald's Large Black Heart.—Large, heart-shaped, and of very superior quality; color dark shining purple or black; flesh firm, purple and sweet; tree very productive—ripe in June.

Elkhorn, Black ox heart, Large Black Bigarreau.—Fruit large and heart-shaped, an excellent variety for market—ripe second and third week in July.

Knight's Early Black.—Color rich dark hue; flesh firm, juicy, and sweet—ripe in June.

Napoleon Bigarreau.—One of the finest varieties. Fruit white, with red spots; size large: flesh white, solid, and sweet—ripe in July.

White Bigarreau.—One of the largest and finest varieties. Fruit heart-shaped; skin yellow, with a red cheek; flesh firm and fine flavored—ripe in July.

Late White Heart.—Middle size: pleasant flavor; valuable as a late variety—ripe the last of August.

White Tartarian.—An elegant fruit; pale yellow, approaching to amber next the sun; fine flavor, and a good bearer—ripe in July.

PLUMS.

American Yellow Gage.—Oval shape, bright yellow color, equal to the green gage—ripe in August and September.

Bingham, Bingham's Yellow Cling.—A justly celebrated large, handsome variety; flesh rich and delicious—ripe in September.

Bleeker's Gage.—A new and valuable variety; skin dark yellow, with red spots—ripe in August.

Coe's Golden Drop.—One of the finest and handsomest plums in the country—ripe in September and October.

Columbia.—New seedling variety; light purple color; the tree a great bearer—ripe in August.

Downing's Emerald Drop.—Fruit handsome, of a green color; flesh firm and of a delicious flavor.

German Prune.—Valuable for drying; skin red and purple; flesh yellow with a slight acid—ripe in September.

Goliath.—Fruit large, sometimes weighing four ounces; flesh pale yellow, firm and good flavor; the tree a great bearer—ripe in Aug.

Green Gage.—Too well known to need description; one of the most desirable varieties known—ripe in August.

Huling's Superb.—Size large; skin greenish yellow; flesh sweet and excellent—ripe in August.

Lucomb's Nonesuch.—Very large, resembles the green gage—ripe in August, and a great bearer.

Nectarine Plum.—The fruit beautiful; skin varies from red to crimson; flesh yellowish, of a mild pleasant flavor—ripe early in August.

October Gage, Frost Gage.—A valuable native fruit—ripe in October, when most plums are out of season.

Prince's Imperial Gage.—Fruit of the finest quality; skin yellow; flesh rich and of excellent flavor—ripe in August.

Blue Magnum Bonum.—Size large; color blue; flesh firm and excellent for preserves; tree an abundant bearer—ripe in September.

Blue Gage, Purple Gage.—Medium size; skin purple, covered with a bloom; flesh rich and fine; tree a great bearer—ripe in August.

Bolmar's Washington.—Has weighed four ounces; color greenish yellow, with crimson specks; flesh yellow, firm, sweet and delicious—ripe in September.

White Magnum Bonum, White Mogul, White Holland, Egg Plum, Yellow Magnum Bonum.—Fine size; skin yellow, covered with white bloom; flesh yellow, rich, firm, and excellent for cooking or preserving—ripe in September.

Red Magnum Bonum, Red Imperial, Purple Egg.—Size large; deep red color, covered with blue bloom, flesh hard and acid; excellent for cooking and preserves—ripe in September.

Prince's Orange Egg.—A large beautiful orange-colored fruit; flavor rich—ripe in August.

B. G. BOSWELL.

New-York, March, 1844.

[For the Farmers' Club.]

SEEDLING FRUIT TREES.

It must be apparent to the most casual observer that many of our old and valuable varieties of fruit are becoming extinct, like almost everything, they seem to run out. The genuine golden pippin it is said cannot be found either in Europe or America. Trees of the Esopus Spitzenberg are dying every where, even in the new and fertile soil of the west. The newtown pippin, morello cherry and butter pear of Pennsylvania, are much degenerated generally.

The fruit growers of the west have done good service in bringing out many valuable varieties of fruit from the seed. This was done from necessity, not choice. When the west was first settled it was difficult to procure trees from the east, many were raised from seed and suffered to come into bearing. From these seedlings many choice varieties of apples, pears and peaches have been selected, that in quality will vie with the best fruits of any country.

In the old States some new fruits have been produced. The Porter apple and Hubbardston nonesuch, bring the very highest prices in the Boston market. The late Mr. Manning of Salem, Mass., produced six new and valuable varieties of cherries from the seed. Hovey's new seedling strawberry is now cultivated in almost every state in the Union. The Rip Van Winkle pear, summer Spitzenberg apple and winter Bolmar plum are valuable additions to our fruit culture, and are found at the nursery of Charles Hamilton, Canterbury, Orange Co., N. Y. The Tippecanoe and Eastburn's choice peaches, and a few other new varieties in the vicinity of Philadelphia, are now taking the place of the old kinds.

The hollow core pippin and Gates apple of Ohio will supply the places of the Newtown and golden pippins. The Ohio pearmain, lemon pippin and Pryor red apples, and the Burlinghame pear equal any thing in the way of fruit found in our own State.

But the man, who, during the last forty years, has accomplished more than all the rest of Europe, is the late Dr. Van Mons of Brussels, who produced more than eight hundred varieties of pears alone, which are now taking the place of nearly all the old pears of Europe.

It may be said that we can import Van Mons' new kinds, this has been done to a great extent but not a quarter part of them ever became acclimated. Even when the trees grow well the fruit is often inferior. We therefore ought to think more of one good native variety than of five foreign ones, except where the foreign ones have been thoroughly tested and acclimated.

But why should we import any thing in the way of fruit trees? Why not raise from the seed as Van Mons did? His method was to select those seedlings that were thrifty and had fine glossy thick leaves. A scion was cut from such trees and grafted on a good sized tree, which soon brought the scion into bearing, and thus tested the quality of the fruit.

It is to be hoped an increased attention will be paid to this interesting subject.

B. G. BOSWELL.

Poudrette as a Fertilizer in comparison with other Manures.

TO THE FARMERS' CLUB OF THE AMERICAN INSTITUTE:

The subject of manures having been recently discussed at several of your meetings, induces me to submit the following communication in relation to poudrette, a manure prepared from night soil, which until within a few years, was wholly unknown in this country. By a reference to the writings of Liebig, the lectures of J. F. W. Johnston, and the "Farmer's Encyclopedia and Dictionary of Rural Affairs," by Cuthbert W. Johnson, (works of great value, recently re-published in this country,) it will be seen that poudrette, or the manure made from a preparation of night soil, was estimated as one of the most valuable fertilizers in use in Europe, until the partial introduction of *guano*.

At page 841 of the Farmer's Encyclopedia, it is said that "night soil is a powerful manure. This valuable fertilizer has not been employed in England to the same extent as on the continent, although it is certainly one of the most valuable of the organic manures." On the next page he says, that "long experience has taught many nations, the value of this manure. In China, it is preserved with the greatest care, mixed with a fat marl, and according to Sir George Staunton, made into cakes, which after being dried in the sun, constitute a regular article of traffic between the citizens, and the cultivators of the soil."

Dr. Granville says, that "the cultivation of the vine, is one which requires, in certain arid and mountainous soils a liberal use of human manure." And he further says, after an extensive tour on the continent for the purpose of enquiring into their system of cultivation, that "*night soil* is husbanded in every part of the continent I have visited, with a jealousy and care, which prove how valuable it is considered." Arthur Young, who wrote in 1772 says, that "the effect of night soil was *prodigious:* it just trebles the produce. In all the experimenls I have made with this manure, I have ever found the results almost uniform."

Another English cultivator, Mr. Dixson, says that, "this manure is by far the most invigorating of any I have ever yet tried. Bones, in *any* state, will bear no comparison as a help for *any crop*." Professor J. F. W. Johnson, in his lectures, on the application of chemistry and geology to agriculture, says that "Payen and Bonsingault, give the relative value of night soil in a dry state, or poudrette, as compared with farm yard manure—10½ pounds of the former, to 100 pounds of the latter."

The foregoing quotations, from well established authorities, would seem to be sufficient to satisfy any farmer of the value of this manure. It may however be said by some, that they are not sufficient, as the experiments were made by "mere book farmers," under circumstances very different from those under which it will be used in this country; therefore it may be well to give extracts from a few of the numerous reports now in my possession, made by intelligent practical farmers, in this country, who have within a few years, used considerable quantities of the article prepared in this city, by *The New-York Poudrette Company*, those who were the first to undertake its preparation in the United States. In giving these extracts howev er, it is but just to say, that in applying the article to their crops, it was not their design to make experiments for publication, and therefore they did not keep minutes and make accurate measurements; but have given their reports from general appearances. A gentleman residing on the north side of Long Island, who has used over a thousand bushels of this manure—says of it, when used "on corn, a gill was put in the hill, against eight times the quantity of hog pen manure, and against five times the quantity of fish manure—the latter, a compost of "sting kales" and earth, prepared the previous autumn, with results much in favor of poudrette, for the first six weeks, after which its superiority became less manifest, until the general appearance and crop became so nearly equal, that no difference could be perceived." He says also that "on *grass lands* in the month of May, it has a *decidedly* beneficial effect as a *top dressing*. I should think twenty bushels to the acre would double the crop for one year." Another gentleman, in the same neighborhood, who has used it in still larger quantities says, "where the poudrette was used, the wheat came in well. It stood the winter well and the berry was fair; but where bone was used, about the same cost to the acre, in the same field, it was *winter killed*, and very much shrunk, and the produce was only about one half the number of bushels to the acre. I used it also on corn, by the side of the best yard manure, and the result was decidedly in favor of the poudrette." He also says in a letter, dated May 30, 1842. "I used poudrette on my corn last year. in *smaller* quantities than in previous years. I am of opinion, that *a gill to the hill, at planting*, is better than a larger quantity."

From another experienced farmer in the same vicinity, I have the following report on its application to ruta bagas and other vegetables, viz:

"On ruta baga, forty bushels to the acre, produced an astonishing result, a large number of experienced farmers pronouncing it the most abundant crop they ever saw. In the garden it was equally effectual, producing the finest melons, squashes, cucumbers, peas, beans, &c. Indeed I consider it peculiarly suitable for all kinds of annual plants, which require a rapid growth."

After several years' further experience with it, the same gentleman, who has used over four thousand five hundred bushels, within the last six years, says,—"My opinion of its value on most crops, was expressed in a former communication, and the correctness of that opinion has been fully confirmed by further use. The past season, I applied it principally to oats and wheat; and it may be sufficient to say, that the result was entirely satisfactory. Indeed the *convenience* and *advantages* resulting from the use of the article are so great, that one accustomed to possess them, would hardly think himself able to carry on farming without them." A gentleman in Westchester county, New-York, says,—"For *grass*, as a *top-dressing*, I can speak in the highest terms of poudrette," and "for turnips, I know it to be almost a certain guard against the fly; mine, this year, are as fine as were ever raised in the country. I put the poudrette in the drill, after the seed, and it took but a very small quantity, only enough to be seen."

Mr. Samuel Fleet, a gentleman of much experience, both as a practical farmer and agricultural writer, says,—"I find it very efficient where applied at seeding down. The seed took much better *in the same field*, where poudrette was used, than where other manure was applied, the whole being put down at the same time."

For melons and other vines, its effects have been thoroughly tested. One gentleman says,—"I planted water-melons in rather poor gravelly soil, in 1841, by digging holes eighteen inches wide, and put one quart of poudrette mixed well with earth, in each hill; when the plants were up, I added another pint of poudrette to each hill, spreading it over a space of about three feet, and hoeing it well in. The effect was, that the vines grew vigorously, and on the small patch of three square rods of ground, I gathered *sixty-three* melons, weighing from thirty to forty pounds each."

Another gentleman, who resides in the northwestern part of Connecticut, says,—"I have found poudrette sprinkled on vines, the *most effectual application to destroy insects* which were eating the leaves or stalks, more especially the large black insect, which destroys the vine of the winter squash in autumn. I have not been troubled with worms in the cornfield where it was used; but I do not infer from my limited experience, that it will always prevent their ravages."

Upon an old field of fourteen acres, in Monmouth county, New-

Jersey, "covered with Indian grass, with here and there a dwarf pine or cedar, which was broken up about the sixth, and planted about the eighteenth of May, with a *gill* of poudrette to the hill, was raised four hundred bushels of corn, or nearly thirty bushels to the acre;" and the gentleman who raised it says, "I am confident, that *without* the poudrette, I should not have had more than *three* bushels of *inferior* corn to the acre; or forty-two bushels at fifty cents, worth twenty-one dollars, which taken from the value of four hundred bushels, or two hundred dollars, leaves one hundred and seventy-nine dollars, as the produce of the poudrette." The poudrette, a gill to the hill, or about ten bushels to the acre, cost less than sixty dollars on the premises, carried by Camden and Amboy railroad, at the very highest rates of freight.

Dr. George Emerson, of Philadelphia, the editor of the republication by Carey & Hart of the "Farmer's Encyclopedia and Dictionary of Rural Affairs;" says, "I made experiments last spring, 1843, in Kent county, Delaware, with poudrette prepared by Mr. Minor, in New-York. This concentrated manure, was applied in its usual form, that of a coarse powder, dropped in contact with the seed at planting. The experiments were made in three different fields, all however of very similar soil, a light loam greatly impoverished with long tillage, without manure. The quantity applied was only a gill to the hill, or about ten bushels to the acre, and the product was at least double in every case, to that on the adjoining ground."

I might give numerous other extracts, equally to the point were it necessary; but these are sufficient to satisfy those who will read them, of the value to agriculture of an article which is now generally wasted.

It is not yet *seven* years since attention was directed towards it in such a way as to produce beneficial results in this country. In 1837, our best agricultural writers were *entirely* unacquainted with *any* mode of preparing it for use, as the writer knows, having corresponded with them in relation to it; but now it is prepared in *this* city, and in Philadelphia, on a large scale, and in Boston to a limited extent, whilst the demand for it is becoming very great, and its effects highly beneficial and satisfactory. Is it not important then, that vigorous efforts should be made to bring every farmer in the country to understand and appreciate its value? Such is the opinion of one who has devoted nearly seven years to the enterprise, and I therefore offer to furnish *any farmer*, who will apply either personally or by letter, with such information as will enable him to preserve and use to good advantage, such of the material as he may be able to obtain for his own use, and shall be gratified if the *Farmers' Club* or the *American Institute*, will call their attention to this proposition.

All of which is respectfully submitted by

D. K. MINOR.
23 *Chambers-st., N. Y.*

Effects of Poudrette on Indian Corn.

The ear of *Indian Corn* accompanying this, is submitted for the inspectors of the Farmers' Club in the city of New York.

This ear was taken on the 12th of September, 1843, from one of the stalks that grew on corn planted on the 27th of June, in the forenoon. The severe drought with which the region of country around the city of New York was visited this year, had then existed for some time. There was no fall of rain after the corn was planted until the shower on Monday night, the 17th of July, 1843. The following day, the 18th of July, just three weeks after the corn was planted, it *was measured* and was two feet high *from the surface of the ground* to the end of the leaf—an unparalleled growth.

On the first of September, just sixty-six days after planting, there were ears of corn on the stalks fit for roasting or boiling.

On this 12th day of September, just seventy-eight days after planting, it appears sufficiently glazed to have the corn cut up by the roots and ripen in the shock, in which condition the frost does not affect it.

The corn planted was of the kind called the *Dutton Corn*, yellow, twelve rowed and ordinarily measures in length eight inches, and in circumference six inches at the butt end. The corn now exhibited is yellow, twelve-rowed, measures ten inches in length, and 6 inches in circumference.

The corn was manured with poudrette ; *three* experiments of new and different compounds, mixed with night soil had been prepared to be tested and compared with poudrette, as heretofore made by the Lodi Manufacturing Company, and which ordinarily contains fifty-eight per cent of ammonia or fructifying power.

Bear in mind the corn was planted on the 27th day of June, about the middle of as severe a drought as was ever remembered in the memory of man in the region of New-York. Experiments Nos. 1 and 2, were out of the ground on Saturday morning, the 30th, at about day-light ; less than four *whole days*. That planted with the poudrette as heretofore made, was up on Monday morning, two days later. Experiment No. 3 did not come up until Wednesday morning. This corn is taken from the hill manured with experiment No. 2, which was the favorite at first, and has maintained its ascendancy to the present time, and is estimated to contain upwards of eighty per cent of fructifying power.

The experiments were made in three different neighborhoods, and on different soils.

In France, according to a French work, by Baily, recently translated and published here, it takes from four to six years to make poudrette, which gives twelve per cent for ammonia. It has usually taken the Lodi Manufacturing Company one week to make poudrette. But poudrette, according to experiment, No. 2, can be made in two days, at the works of the Lodi Manufacturing Company, on the Hackensack river, in New-Jersey, near the city of New-York, and is estimated to contain upwards of eighty per cent of fructifying power. Heretofore it has been known that *all manures* in a severe drought, have proved rather injurious than beneficial, but this new compound, from the experiments that have been made, shows the reverse, and it is believed it will remedy some of the complaints that heretofore have been made against poudrette. Experiment No. 2, combines the power of retaining the gas called ammonia, in the night soil, thereby preventing its sudden evaporation as some suppose, and it will attract and retain moisture, as evidenced in the experiments that have been made this season. It will enable the manufacturer to reduce the price of the article, if taken from the factory; and will enable corn growers in Maine, New-Hampshire and other places, to raise crops of corn which are now usually cut off by the frost.

A. DEY.

New-York, September 12th, 1843.

Remarks on Pruning.

Although pruning is an operation of very general practice, its principles are but little regarded, and often great injury is done to trees by injudicious management. It is an art which cannot be wholly learned from books, or by lectures, but requires a well grounded knowledge of vegetable physiology, and a strict observance of the modes of growth of the various kinds of trees. In order to execute with success this very important branch of arboriculture, it is absolutely essential to carefully observe the periods of the flow of the sap, and of the appearance of the leaves; the growth of the branches; and the manner each kind is disposed to produce fruit. For ornamental and forest trees require their heads to be regulated and balanced, so that one side may not have a disproportionate number or weight of branches to the other, and those of trees which stand along the borders of cultivated fields, often require foreshortening so as to prevent their shades from injuring the crops; and in order to preserve the vigor of fruit trees, to render them more beautiful, and to cause the fruit to be larger and better flavored, provision should always be made for a sufficient quantity of bearing wood, duly distributed in every part of the trees, and properly exposed to the air and light, and at the same time to remove all superfluous and useless branches, which tend to exhaust and cause premature decay.

There is a prevailing opinion, that if trees be pruned when the sap is in free circulation, they will "bleed," and thereby deprive themselves of a portion of their chief food and nourishment. This "bleeding," as it is termed, can be of no essential harm to a tree, as nearly two-thirds of the sap is thrown off by evaporation through the surfaces of the leaves, after having performed its most important functions, while the other third is supposed to undergo peculiar changes, and contributes to the formation of wood, bark, leaves, fruit, &c. There is also a popular notion, that when branches are taken from a tree, so many organs of waste are cut off; and it has been particularly insisted upon, that by the excision of large branches, the supply of sap and nourishment which went to their support, would cause a proportionate increase of stem. The results of experience, it may be unnecessary to add, prove this opinion to be erroneous in principle, and that when a branch is cut off, a portion of nourishment to the stem is also cut off from the junction downwards to the root. Every branch of a tree, of whatever size it may be, not only draws nourishment and increase of substance from the stem and its corresponding root, in proportion to its size, but also supplies them, in return, with a due proportion of nutriment, and by which their substance is increased; for if an overgrown branch of a thrifty tree be pruned off, the annual increment of the diameter of the stem is found not to exceed the previous rate of growth; or, the excess, if any, is not equal to the amount of wood which had been periodically formed by the branch or branches thus separated from the stem.

The most favorable season for pruning, in general, is when the trees are in leaf, and their vitality is in full action. For in many instances, as in the oak and walnut tribes, if performed during the dormant periods of the year, an incipient decay of the surface of the wound takes place, and the bark below loses its vitality, and the wound soon becomes enlarged to a considerable extent downwards; and in addition to the space occupied by the branch, it exposes a portion of the surface of the stem to the action of air and moisture, which in time decays and leads to final destruction. On the contrary, this rarely occurs in a vigorous tree that has been pruned in summer, soon after the expansion of the leaves, when the vital functions are in full activity, and the layer of alburnum or young wood has already begun to be formed, and which may be seen around the edges of the wound. As the season advances, the wound becomes more and more covered by the young wood, which, by the end of the summer, will be so far ripened as to protect the bark from the effects of moisture and winter frosts. The proper time for performing this operation is when the leaves have acquired one-half or three-fourths of their natural sizes. There is another advantage also attending this period of pruning, in enabling the operator to free the trees from an excess of foilage, and to give proper weight and symmetry to their heads. These principles have been deduced from experience, and are strictly in accordance with the laws of vegetable physiology. If the branch, whether large or small, acted merely as a drain on the vessels of the stem and root, and if the sap it derived from them were elevated to the leaves of the branch, and from thence returned no farther than the origin or point of union with the stem, then the common opinion would be correct.

On the contrary, however, when it is found that the existence and increase of every branch, twig, and leaf, depends on a communication with the root, and that this communication passes through the stem downwards to that organ, and from it upwards periodically; and, moreover, that every periodical series of vessels thus formed in the branch, has a corresponding series of vessels found in the stem from its point of emitting the branch to the root, it is clear that a branch not only increases in substance by the functions of its own organization, but must, of necessity, periodically increase the substance or diameter of the trunk of the tree.

D. JAY BROWNE.

(F.)

AMERICAN INSTITUTE—CONVERSATIONAL MEETING.

Professor J. I. Mapes, *Chair'n.* Henry Meigs, *Sec'y.*

The following report is respectfully submitted to the Institute, January 13, 1844.

Among other adjuncts of the American Institute, they have established conversational meetings, the object of which is to elicit from members such facts in relation to the subject of conversation as each member by reading or experience may be possessed of. Thus each member can avail himself of the reading and experience of an hundred practical or theoretical men, for twenty years, in the short space of a single hour.

By the following example, it will be seen that the information collected during the evenings in which iron was the subject of conversation, *is fully equal if not superior to any treatise* yet published.

Iron.—Cast iron is composed of alternate molecules of a spherical form, of carbon and iron *mechanically* and not *chemically* aggregated.

Cast Steel is a chemical and not a *mechanical* admixture of carbon and iron, in the same proportions as in cast iron—only differing in their conditions.

Wrought Iron is the result of cast iron, after having been freed of its carbon. The process by which this is produced is called *puddling.*

Steel is made by placing bars of wrought iron in contact with carbon, and by a process called *cementation.* Each ultimate particle of iron receives in chemical combination its equivalent of carbon—thus increasing its strength or ability to resist mechanical forces, some *twenty times or more.*

Cast Iron.—The improvement in the quality of cast iron produced from American ore, has been very great, and the expense at which castings can now be produced, is less than *one-quarter* of that charged some twenty years since, while the quality has been materially improved.

The modes of treatment in the cupola, bloomery, blast (hot and cold) and other furnaces, were fully described, but are too voluminous for detail here.

Many methods of manufacturing wrought iron with anthracite and other coal, were described, and the superior quality of the American *boiler iron plate* was fully shown.

To build a boiler of English *boiler iron,* it is first necessary to make a frame, called a gallows frame, on which the plates are butted, and each edge attached to the bar, by a row of rivets—the two ultimate edges supporting each other and preventing the iron from breaking out from each rivet hole, to the edge of the iron. This arrangement requires *one-third more weight*, and when finished, possesses *one-third less strength, than boilers made from American iron!*

Without any such arrangement of bars on which to rivet the plates, with American iron the sheets are lapped at their edges and the rivets pass through both sheets. The points so rivetted have proved by experience to be *the strongest part of the boiler.*

And where *right angled turns* are required, the sheet may be bent to the L *form*, without fear of cracking or being at all injured in its properties or strength—thus getting rid of the useless angle or L *irons* which are *necessary* when *English plates* are made use of.

This superiority, in part accounts for the greater speed of American steamers, the boilers being capable of sustaining a greater pressure, may be made of a less size—a consequent reduction of the weight of iron and the water contained in the boiler—a proportionably greater speed is the necessary result.

In relation to *iron ships*, we subjoin the statement of John Clowes, Esquire, a member of the American Institute.

"At our last meeting, there was considerable information elicited from several speakers on the subject of *iron boats, steamers, sailing vessels, &c.* In accordance with the objects of these meetings, viz: to disseminate useful and practical information, do me the favor to accept a few recorded and recollected facts on this interesting and useful public improvement. On the history of iron boats, and iron as a material for ship building, I would refer to Grantham, C. E., published in 1842; a publication containing much useful and practical knowledge. Mr. Grantham is one of the firm of Page & Grantham, Iron ship builders Liverpool, England. I myself was born and brought up in Staffordshire, in the immediate vicinity of several large iron furnaces, and have a distinct recollection of seeing iron canal boats as early as 1795; many of which were built before 1785. They were generally employed in freighting ironstone, limestone, pig iron, &c. I am aware it is a common error to suppose that vessels of iron are but of recent date, and that their advocates are only those who are workers in iron; and many deem iron vessels as visionary, in this wonder-working, improving and go-ahead age, but the invention is not of so recent a date. Iron vessels have long been known, and have for upwards of forty years been gradually making a sure though slow progress. Mr. Grantham, in page 6, observes, 'my partner, Mr. Page, was engaged in building iron canal boats upwards of thirty years ago; and I myself have seen iron vessels in Staffordshire of a still greater age.' Again, in pages 6 and 7, 'the iron steamer Aaron Manly was built in 1820 for a company in Paris, to ply on the river Seine. In February, 1842, this iron steamer and four others upon the river, were all in good condition; and from 1822 to 1830 the iron hull of the steamer Aaron Manly required no repairs. The second iron steamer on record was built by Mr. Grantham's father, in 1824, for the Dublin Steam Packet Company to run on the river Shannon, in Ireland, and such was the satisfaction of this steamer's performances, that the said Company had built for them and put on the same river, five other iron steamers.

In 1842, they were all running and in good condition, and had cost but very little for repairs, although they had frequently been aground with full cargoes. The first iron steamboat built in Liverpool was in 1826, by the firm of Fawcett & Co. About the year 1826, Mr. John Laird erected very extensive works for building iron vessels at Berkenhead, near Liverpool, and has been constantly employed ever since. He built for the British government the two steamers Nemesis and Phlegethon; these vessels were sent to India and employed in fighting against the Chinese; and although often aground, their captain's reports in August, 1841, state that "they had just hauled up for an examination previous to an expected action, and nothing could look better than the bottom of each vessel—not a single rivet had started."

After 1830, establishments for building iron vessels became general throughout Great Britain, and iron steamers and large sailing vessels were to be seen on the rivers Thames, Mersey, Clyde, Shannon, Severn, and in almost every port and in every river in British India. In 1832, iron canal boats, steamers and sailing vessels began to be adopted in America; gradually increasing in numbers and magnitude; and at the present period we have scarcely a river or lake that is without its iron steamers and iron sailing vessels. It may, perhaps be proper for me here to add that the best publication relating to iron vessels to be found in the United States, is the United Service Journal, published in London, May, 1840.

The friends of iron, as a material for shipbuilding, claim its advantages over wood, embraced principally in a commercial point of view, as follows: First, in strength, combined with lightness. Second, the greater capacity for stowage, being in the proportion of five to four, or one-fifth more in an iron than wood of the same tonnage. Third, in safety from fire or wreck; experience having proved that it is almost as difficult to destroy an iron vessel on shore as to burn her. Fourth, the material being much lighter to attain the same strength and occupy less space; therefore, the model of the vessel may be finer and better adapted to great speed. Fifth, durability: it is as yet impossible to assign any period for the actual duration of an iron vessel in salt water, inasmuch as they have only had about twenty-two years experience on this point, and, although this is about double the age of a good wood vessel, yet, in the wear of an iron hull, it is scarcely perceptible in the wear of the plates; and upwards of forty years' experience with iron boats in fresh water, furnishes no accurate data by which to judge of the period of their duration, if kept in constant service. Sixth, economy in repairs: on this point, it is positively known that the general repairs are not one-quarter as much as in wooden vessels. Seventh, draught of water: iron vessels, built for river navigation, draw about half the depth of wooden vessels of the same size; and for sailing vessels, the draft is in accordance with the model; but, when built in the most approved model for holding in a sea-way, they do not exceed two-thirds the draft of vessels built of wood. Lastly, the cost of iron, when compared with wood, is decidedly in favor of the former.

Grantham, on page 41 says: 1st. "A sailing vessel not exceeding 300 tons burthen, is equal to a 12 years timber vessel of the same external dimensions. 2d. Iron vessels of 300 tons burthen are rather less expensive than wooden vessels. 3d. The larger the vessel the more in favor of iron in the first cost. These estimates are for vessels having like finish." Iron vessels in hot or tropical climates are healthier and cooler than wooden vessels. This fact has tended to increase the number of iron steamers and sailing vessels used in British India. The late unfortunate expedition to Africa, under Capt. Trotter, has demonstrated the superiority of iron over wood in point of health and preservation of life. His opinion on this subject (which has been published) states, that the "mortality in wooden vessels is at least double that in iron vessels." It is stated in Grantham's work, page 58, that "in tropical climates iron vessels collect shells and weeds—and that on entering fresh water it always destroys them, as they are bred in salt water, and the weeds that collect in fresh water under tropical climates, always drop off as soon as the vessel reaches the sea." And it may here be stated that experience confirms the fact, viz: that iron vessels sailing part in the sea and part in fresh water—for instance, from Liverpool to Glasgow, &c.; their bottoms are uniformly clean, bright, and rather polished; and further experience proves that the same mechanical principle which prevents iron from rusting or corroding while in use, alike operates to prevent an iron vessel's hull from rusting while in active service; and it is known that an iron rail of a railroad, will rust away much sooner by lying exposed to the atmosphere, than if in active service by the car-wheels, and almost every person is aware of the simple fact that all kinds of iron machinery, iron tools, &c., will wear more than twice as long in active service, than they would lying exposed to the atmosphere and not in use. This active wear or working agitates the crystals or particles which compose the iron, &c., and the effect is to prevent rust.

The following facts are selected for the purpose of illustrating the reason why the wooden vessels are more liable to injury or a total loss when on a lee shore than iron vessels. Iron vessels, in consequence of the whole structure being so perfect in the combination of the several parts, arising from the fastenings being of the same texture as the portions of the materials brought in connection with each other, gives such strength and stiffness to the hull, as almost to bid defiance to the violence of the sea: while in a wooden vessel it is known that the metallic fastenings act not only chemically but also mechanically to accelerate her destruction, for as soon as the close connection of the several parts is at all diminished; if blown on a lee shore her destruction is almost inevitable. The iron steamer Grantham, on the river Shannon, was by accident, run high and dry on a rock. After two days, when she was fairly afloat, it was found that she was perfectly dry and tight. The iron steamer Lady Landsdowne, was also run on some rocks in the same river; when she was got off it was not perceptible that she had sustained any injury.

The iron steamer Garry Owen, at the estuary of the Lower Shannon, in the storm of January, 1839, broke from her anchors, and went ashore in the most violent part of the gale, and remained for several hours on a hard beach without sustaining any damage, although out of *twenty-seven* wooden vessels, in the same neighborhood, not one escaped without serious injury, and some of them were totally lost. The iron sailing vessel Vulcan, on the same shores struck on a reef of rocks, where there was less than three feet of water, while the ship drew over six feet, and going at the rate of five and a half miles an hour. She worked over the reef without injury. You will find the following statement in the New York Express, dated Aug. 9, 1843:

"The iron steamer John Randolph, after nine year's active service on the Savannah river, was hauled out of the river last week for repairs, and on examining her bottom, it was found that the wear of the iron plates of which she was built, was scarcely perceptible in any part; some indentations occasioned by snags, were found, but they were easily repaired."

This fact, remarks the Savannah Republican, clearly tests the superiority of iron for the hull of boats, over that of wood. At a future time, I will furnish you with some other facts of a more striking character than the foregoing.

Notwithstanding the many fashionable hypotheses in *relation to the wearing out or ultimate non-cohesion* of the particles of iron in railroad tracks, by weight of load and linear impingement, still it was clearly shewn that by practical results, stated at these conversations, when the rail was of sufficient width and thickness, the impingement of the wheels did not deteriorate the quality, but did nearly or quite prevent the oxydation.

That although a rail placed by the side of the sleeper, in a *state of rest would rust*, still those rails upon the sleepers *having cars passing over them, did not suffer by oxydation!*

The different modes of *tempering steel*, from an axe to a watch spring, were fully explained. The modes of welding, of coating cast iron with steel, and of rendering cast iron malleable, were clearly treated. The different kinds of ore, with the methods of abstracting the metal from them, were fully explained by practical men.

Modes of preventing oxydation, and the results obtained by experimenters on this subject, were highly interesting. The experiments of the French and English societies, on the deterioration of quality in the axles of railroad cars by use, were fully entered into and many remedies proposed, some of which it is believed, will prove efficient. The various uses of iron in the construction of houses, bridges, lighthouses, &c. &c., were fully investigated, and were well understood by all those present.

The resources of our country in relation to iron, were clearly shown to be sufficient to supply the world, and the auxiliary materials necessary for its manufacture have long been known to be inexhaustible. The beds of iron ore in Essex county, in this State, have produced iron of a quality not to be surpassed. Many specimens were exhibited at the meeting.

February 7th, 1844.

WOOD.

Present, thirty-two members.

Prof. Mapes, Chairman. H. Meigs, Secretary.

The minutes of the last meeting were read and approved.

Mr. Meigs.—The great age attained by some trees is very interesting. Claudius James Kirk, British agent at Bagdad, found on the ruins of Babylon, an old tree, which he states to have stood probably eighteen hundred years. I wish to hear Mr. Brown on the age of trees.

Mr. Glen.—Some of the trees of England are 600 years of age. There are trees in India many centuries old. Some of the cedars of Lebanon are of great age.

Chairman.—Refers to Holzapffel's account of the ages of trees.

Mr. Brown.—There are some authentic records of great ages of trees. I examined one in Teneriffe, the dragon tree, yielding the dragon's blood of the shops. That tree is believed to be *four thousand years old*. It is forty-five feet in circumference and is now hollow.

There is in the city of Mexico, a deciduous cypress, of forty feet in circumference. From the accounts given of the dragon tree of Teneriffe, it was coeval with the primitive inhabitants, the Guanches, and must be *two thousand years old*, at least.

Decandole thinks that the cypress of Mexico, must be *two thousand years old*.

The great Linden tree of Nieustadt, Germany, is fifty-three feet in circumference. At the height of fifteen feet, it branches out one hundred feet on each side, and these branches are supported by one hundred and eight pillars of stone and of wood. There are stairs made for persons to ascend it, small gardens are made among the limbs, and their produce sold to the visitors. This tree is supposed to be two thousand years of age.

The Wallace Oak, of England, is one thousand years old. The great chesnut of Chatsworth, is believed to be fifteen hundred years of age. There are oaks in America, of five hundred and eighty-three years of age. The two white oak trees of Flushing, Long Island, called the Fox Oaks, by their rings are 483 years old. The Lawrence oak, of Flushing, is estimated to be 500 years of age, it is eighteen feet in circumference, and its branches cover an area of one hundred feet in diameter. Our white pine trees count from 200 to 300 years of age. Black oak is found to be 430 years.

What woods are best for the various parts of ships and carpentry?

Chairman.—The original outward doors of St. Peter's Church, at Rome, were of cypress, and are six hundred years in use. A quotation from Tredgold, page 79, is read.

Mr. Brown.—Sleepers for a railway in Cuba, were made of green wood, crooked, they warped three inches. A cane made of a crooked Jigui stick, was planed straight but warps again.

Mr. Clowes presented from a lady, a printed communication marked A., relative to the ash tree, which was read.

Chairman.—Wood designed for furniture may be well seasoned by placing it in a room heated to a greater degree, than the furniture is to be exposed to.

Mr. Brown.—There are fourteen species of the ash (*Fraxinus*) very various in their qualities. The excelsior of Europe and the white ash of America, and nearly all our ash trees, produce *manna!* We have the mountain ash in abundance; there was no necessity for importing it from Europe. It is extensively disseminated by means of birds who feed upon its fruit. We have *paid five dollars each for young trees from Europe, while it abounds in America!* It is the identical tree of Europe. It is like our locust, attacked when about fifteen years old by a worm called the borer, and often destroyed. The ash tree is and has been an object of superstitious regard all over the world! Schoolcraft says that our native Indians in all past time, and the present, make offerings to it, of the branches of other trees. These offerings, and their remains, are still found at the foot of the ash. In Scotland it is deemed an *anti-witch tree!*

Mr. Glen.—Our black ash wood is bad for burning, but is used for flooring, being good for scouring, as it will give no splinters. Drying wood in a close room will not answer so well as a current of air. All woods shrink in drying, more or less. Pine but little, because the atmosphere penetrates it but little; when planed off after long exposure, it will again shrink a little.

The reason why pine warps but little, is, that it is a non-conductor of heat and light, being resinous.

Kyanizing makes wood brittle, and thus diminishes its pliability and its strength.

Chairman.—It appears that woods containing resin are on that account stronger. Tredgold recommends injection of pine wood with resinous matter.

Mr. Brown.—Surfeiting wood with oil adds much to its strength.

Chairman.—It is said that trees extend their roots as far as their heights!

Mr. Brown.—Magnolias do not. Some trees penetrate the earth more deeply. Lombardy poplar extends its roots more than double its height. Roots in their growth are known to displace stones in the foundations of buildings.

Trees in Europe grow tall. Some Lombardy poplars in France attain 250 feet of height. It is said that Lombardy poplar roots have been traced 400 feet.

In all countries, trees extend their branches most against the direction of the prevailing winds. The general direction of branches in this country is towards the northwest. Trees growing on an undulating surface, adapt their lower branches somewhat to the undulation.

Chairman.—Green wood lessens by drying ; will it swell again by moisture to its original dimensions ?

Mr. Brown.—Warm water will swell it beyond.

Mr. Glen.—When cut, the capillary attraction is at its strongest force. Seasoning destroys this property of wood. It must be subjected to wet for a long time, in order to regain its size ; boiling water may do it.

Pine being resinous, might be usefully impregnated with additional resin. Hard woods cannot be well impregnated.

Chairman.—Wood retains its length so well, that seasoned wood formed into pendulum rods have been preferred to rods of metal. Some wooden structures, ships particularly, have appeared to lengthen, but it appears to be owing to the interposition of matter, between the wood ends, forcing them apart.

Mr. Brown.—I examined some railing on a bridge. There were two rails of about 25 feet long each, spliced together and spiked. They were made of green white oak. I adjusted the length by a chain, and in the following spring I found that there had been a shrinkage of *half an inch in 70 feet.*

Mr. Glen.—Wood when *perfectly frozen* and fitted in work, never shrinks, it is believed.

Chairman.—Wood after being turned in a lathe, sometime after, *becomes oval!* Why ?

Mr. Brown.—Owing to the different densities of its rings.

Mr. Meigs.—In our latitude. the southern rings of trees are thicker than the northern. The heart is eccentric.

Mr. Brown.—There is a difficulty in procuring good levelling rods. Mahogany is good ; I have tried many kinds of wood and have found the yellow birch to be best.

Chairman.—The British reject the use of ivory scales. They prefer box to lance wood.

Wood and its Application to the Mechanic Arts.

Chairman.—What are the uses of the Acacia tree ?

Mr. Brown.—We have not this tree ; the *true Acacia.*

Chairman.—The keel of the Gibraltar, a ship of the line, was made of Acacia, and after running from 1751 to 1843, the keel was taken for use as a keel in a new vessel. It was not in the least injured by worms.

Mr. Brown.—Hickory is much less liable than many other woods to the attack of the salt water worm. Hemlock, with the bark on, is durable for docks. The cabbage tree of the south is valuable for docks on account of its great durability. The worms are far more numerous and destructive in tropical waters than elsewhere. The *Teredo Navalis*—ship worm—was introduced from India into Europe in timber. It soon became numerous and destructive to ships. This race strangely disappeared six or seven years ago, but has lately re-appeared, and is increasing again. This teredo makes a honeycomb of timber. At the Navy Yard it was found that logs which had lain in mud were bored as far down as the mud, but the timber was sound below.

There are some tropical woods the worm will not touch. The *Jocuma* contains a bitter—is hard; so is the Jiqui; the worm will not touch them, probably on account of the hardness. Jiqui breaks leaving sharp splinters at the fracture like points of steel. Its use for walking canes is prohibited in Cuba, because it is a dangerous weapon to stab with when broken.

Wood impregnated with coal tar has stood two or three years untouched by the worm.

The experiment has been tried on piles of driving them full of small nails with *large heads*, so that the rust would form a complete coat for the timber under water. This is too expensive; it might, perhaps, be done on ships' bottoms with benefit. We commit great errors in using improper timber.

Chairman.—I ask information relative to the Alder. I refer you to Holzapffel's account of the piles of the Rialto of Venice.

Mr. Brown.—Alder suffers in alternate wet and dry. Dry, it is very durable—is used sometimes for rafters.

Chairman.—What are the uses of Ash? Tredgold objects to it in frames on account of its elasticity. It stands a jar well, and maintains its figure.

Mr. Brown—Ash is a very *sonorous wood*. Watchmen, therefore, use it for clubs. A pin lightly touching one end of an ash log fifty feet long, is distinctly heard at the other end of the log. White pine also has the same quality.

Chairman—What are the uses of bar wood?

Ramrods and fiddle-bows are made of it.

Beech is good for piles in wet foundations.

Mr. Brown—For ships—Keels are made of sugar maple, white elm, white oak, shell-bark hickory, pignut hickory, long-leafed pine.

Lower frames of ships—Grey oak, red oak, yellow birch, red beech, sugar maple, white ash, scarlet oak, swamp white oak, white oak, rock chesnut oak, black walnut, locust, red mulberry, live oak, long-leaved pine, post oak, spanish oak, wild cherry tree, red elm.

Upper frames.—Of white oak, live oak, red cedar, red bay, red mulberry, black walnut, locust.

Knees—Of white oak, black spruce, rock chesnut oak, black walnut, locust, red mulberry, red cedar, cypress.

Sides--Of white oak, rock chesnut oak, long-leaved pine:

Decks—Of white pine, Norway pine, New-Jersey yellow pine, do. of eastern shore of Maryland, long-leaved cypress.

Carlines and Floor Timbers—Of red cedar, red mulberry, white ash, white oak, yellow pine, long-leaved pine, black spruce, larch.

Tree-nails—Of white oak, locust, long-leaved pine, red mulberry.

Masts—Of white pine, long-leaved pine, yellow pine.

Top-masts—Of black spruce, yellow pine, long-leaved pine.

Yards—Of black spruce, larch.

Cartwright's Work—Frames, boarding and poles of wagons, of white oak.

Axle-trees—Hickory, sugar maple.

Coach-wheels—for Naves—White elm, sour gum, wahoo. For Felloes—Red ash, white ash. For Spokes—White oak, swamp oak, or willow oak.

Cart-wheels—White oak, sugar maple, grey oak, white elm, sour gum, live oak. For Felloes and Spokes—White oak, sugar maple, grey oak, spanish oak, swamp oak, or willow oak.

For Agricultural Implements—For Ploughs and Harrows—White oak, white ash,

Ox Yokes—Yellow birch, rock maple, red flowering maple, yellow pine.

Ox Bows—Hickory.

Sledges—White oak, rock maple, sometimes shod with dogwood or hickory.

Mill Cogs—Sugar maple, hickory, locust.

Cider Mill Cylinders—Rock maple, white oak.

Screws—Rock maple, hickory, iron wood.

Trunk Making—White pine, tulip tree.

Household Wares—Pails of white pine, red cedar, with hoops of white ash, iron or copper.

Measures—For Corn, Fruit, &c.—Bottom of white pine, sides of red or grey oak.

Butter Boxes—Top and bottom of white pine, sides of white ash.

Stop-cocks; rakes, scythe-handles, pulleys, baskets, whip-stocks, brooms, spade-handles, cradle frames, gun stocks, saddle trees, book binders' screws, (hatters' blocks always sour gum,) wooden bowls, spinning wheels, axe handles, shoe lasts, (best of persimmon,) chair bottoms, carvers' and gilders' work.

Floors—White pine, yellow pine, loblolly pine, long-leaved pine, white ash, blue ash, black spruce, larch, white oak, tulip tree.

Doors, Windows, Cornices—White pine, yellow pine, tulip tree, white oak, live oak, black oak, cypress, long-leaved pine, wild cherry, bird's-eye maple, curly maple, black walnut.

Cabinet Making—Mahogany, curled maple, bird's-eye maple, sycamore, sweet gum, wild cherry, black walnut, black birch, yellow birch, canoe birch, sumac, red bay, Florida yew, white oak, live oak, satin wood, atlantus, large-leaved maple.

Coopers' Wares—White oak, rock chesnut oak, post oak, chesnut, white oak used for staves of casks for spiritous liquors, red oak for molasses and fermenting liquors, also grey oak, black oak, pin oak, scarlet oak, Spanish oak.

For Hoops—Young hickories and white oaks split in the middle.

For Staves for Fish Barrels—Red spruce, white and brown ash, yellow birch, white pine; the hoops of blue beech, yellow birch, black ash.

Flour barrels—Staves of oak, ash, beech, chesnut, with hoops of black oak, hickory, white oak, chesnut.

Beef and Pork Barrels—White oak staves, with white oak and hickory hoops.

Pails and tubs—Cedar, white pine, white ash, oak, cypress.

Tobacco and Rice Casks—Loblolly and long-leafed pine.

Sieves, Cheese Hoops—White ash, hickory.

Churns—White ash, red cedar, white pine, with hickory or ash hoops.

Coach Making—Pannels are made of tulip tree, basswood, butternut, frames of black birch, yellow birch, white ash, canoe birch, persimmon.

Shafts—Of white ash.

Civil Architecture, Frames—Of white pine, yellow pine, white oak, black oak, sweet gum, loblolly pine, tulip tree, long-leaved pine, blue ash, cypress.

Roofs—Of black spruce, white oak, black oak, tulip tree, white cedar, loblolly pine, cypress.

Sheathing—Of hemlock, spruce, white pine, yellow pine, long-leaved pine, tulip tree, blue ash, hackberry.

Clapboards—White pine, tulip tree.

Shingles—White pine, spruce, chesnut, yellow pine, arbor vitiæ, cypress, white cedar, black oak, loblolly pine, tulip tree.

Lathing—Hemlock, spruce, white pine, larch, black spruce.

Mr. Grice—Black walnut is objectionable for ship timber, when growing in dense forests. In the western country, several years ago, vessels were built of it. One opened in Philadelphia, four years old, the black walnut was found to be entirely decayed. The white oak plank was much injured by worms. Field white oak lasts well: so does pasture oak if in action, but when laid up soon decays. In motion, the duration extends to fifteen, twenty, and sometimes thirty years. The live oak, grown on hummocks near the sea, is much more durable than that of the forest.

Chairman—Dunham preferred yellow pine for steam engine frames. Russian birch, called maple in England, is used for tanning what is called Russian leather; it has a peculiar odor; many uses are made of this wood. The Chinese use wood from hats to ships; numerous applications are made of it. Casks made for spirits will not hold molasses; the heads are too hard; softer wood is necessary for that purpose.

Mr. Glen—Pine is objectionable for liquors; it imparts a taste not liked—would do so, probably, to molasses.

Chairman—Engravers on wood have tried to infuse Bismuth and other fusible metals into their blocks. What has been the result? Are there new methods of seasoning wood? What is bullet wood? In the West Indies it is worth about $4 per ton—is used as fire wood. It is highly valuable for some purposes. I refer to Holzapffel, page seventy-seven.

Mr. Brown—It is used in Jamaica for cogs.

Chairman—I wish that some member would prepare some *cut sections* of woods for examination, fixing them on glass with oil or glue.

Mr. Brown—Boxwood is used for cuts. There are two kinds, one for engraving, scales, rules, ornaments, &c., is sometimes a tree of fifty or sixty feet high, and one and a half feet in diameter. Another from the Mediterranean is yellow. Toys and instruments are made of it. Apple and pear tree wood are preferable to the latter for engraving. Box shrinks.

Adjourned.

H. MEIGS, Secretary

(G.)

REPORT OF THE MANAGERS OF THE SIXTEENTH ANNUAL FAIR—1843.

The Managers of the Sixteenth Annual Fair of the American Institute having performed the duties assigned them, beg leave to present a report of their proceedings, and the result of their labors.

Their first meeting was held on the 23d day of May, 1843, when they organized by the appointment of a chairman and secretary, and the usual sub-committees to take charge of the various departments.

The following accounts give a true statement of the receipts and expenditures, as reported by said committees; which reports, together with all the vouchers, are herewith presented.

Receipts.

Amount received from sales of tickets at the Sixteenth Fair, at Niblo's Garden, ...	$8,276 25
Amount received at the Cattle Ground, ...	320 87
do for lumber sold at close of Fair, ...	71 78
do for rents of refreshment stands, (including $23.99 from Anderson & Co.)	139 90
	$8,808 80

Expenditures.

(For detailed account, see statement L.)

The premium committee have received seventy-five written reports from the judges, in the various departments of manufactures, agriculture and the arts.

The number of premiums awarded amounted to 676, and are estimated to cost $1,210; they consist of the following, viz:

17 Gold medals.
27 Silver cups.
91 Silver medals.
439 Diplomas.
12 American Poultry Book.
3 Mrs. Loudon's Flower Garden.
2 Downing's Landscape Gardening.
2 Downing's Cottage Architecture.
4 Hovey's Magazine.
10 Bridgeman's Gardener's Assistant.
2 American Flower Garden Directory.

9	American Agriculturist.
5	United States Farmer.
8	Culivators.
4	Buel's Farmer's Companion.
7	Transactions of the State Agricultural Society.
4	Falkner's Farmers' Manual.
3	Dana's Muck Manual.
2	Smith's Productive Gardening.
2	Florist's Guide.
5	Kendrick's American Orchadist.
2	Planter's Guide.
2	Farmer's Mine.
14	Reports of American Institute.
1	Ewbank's Hydraulics.
676	

The board of managers have spared no efforts to render the Sixteenth Annual Fair at least equal in interest and attraction to any that have preceded it. The immense number of visitors who have thronged the saloon during the whole protracted period of the exhibition, afford the best evidence that their labors have not been fruitless. The receipts have been greater than at any of the Fairs of the Institute, with one exception, during the last nine years; and larger in proportion to the amount expended, and yielding more of profit than any within that period. The articles for exhibition and competition were more numerous than on any former occasion; and the increasing attention of our fellow-citizens to the advantages of this method of making their manufactures, improvements or inventions known, is shown by the constantly increasing number of exhibitors at each succeeding Fair. At the Second Annual Fair in 1829, the number of articles was estimated at 1,000; those shown at this Sixteenth Fair cannot, by the same method of computation, fall short of 20,000; and it is our pride to add, of a quality so much improved, that they would scarcely be recognized as the products of the same country. Should this progress continue, (as it assuredly will,) in a very few years our present accommodations will be altogether inadequate, as they are now quite insufficient to show with much advantage or comfort the immense number of articles to such crowds of visitors as have attended on this occasion. The new and judicious arrangement of the exhibition adopted by the committee of arrangements, tended much to the comfort of visitors; yet the want of sufficient space for the proper disposition of the articles and for the convenience of the spectators, was seriously felt and regretted by the managers. The attention of the Institute cannot be too earnestly directed to the immediate necessity of providing a suitable building, with accommodations for holding our Fairs, upon a scale calculated to keep pace with the increasing interest they are attracting.

The Report of the board of managers the last year, presented this subject to the Institute, with some valuable suggestions well worthy of consideration.

The practice of having short addresses occasionally, which was found so attractive during the 15th Fair, was again adopted with advantage. Nine of these addresses, beside the anniversary, the agricultural, and the closing addresses, were delivered on the evenings of the Fair by members of the Institute, and others friendly to its objects. Some of them by gentlemen eminent at the bar, on the bench and in the halls of legislation, and others by experienced practical men, who have cheerfully given their aid to this patriotic work. Their tendency is to create an intellectual interest, and to elevate the character of the Institute. Being short and clothed in graceful and captivating language, they have generally been reported for publication in the daily papers, by means of whose extensive circulation, attention is thus attracted to the Fair, and the number of visitors increased.

A ploughing match, under the superintendence of a committee appointed by the board of agriculture, was held on the 16th day of October, at Paterson, N. J. This was attended by a large number of our citizens, and a vast concourse of the neighboring farmers and strangers from various parts of the country—probably not much less than 4,000 in number, in whose presence the trial of skill and examination of the several ploughs offered for premiums, took place.

Several addresses were delivered, and the occasion proved highly gratifying and pleasant to the spectators, as well as creditable to the Institute, under whose auspices it was held. A detailed report of the ploughing, and the relative merits of the ploughs, will be found among the accompanying papers. To Col. Bankhead, the commandant of the U. S. troops on this station, and to Capt. Gregory, of the ship North Carolina, the managers are indebted for the valuable services of their bands of musicians, politely given on this, and several other occasions during the Fair. Also to the Jersey ferry, and Paterson railroad companies, for the gratuitous conveyance of the committee, with their guests, and all the teams, implements, &c., both to and from the scene of this portion of our annual jubilee.

The silk convention called by the trustees, which constituted a part of the late Fair, was calculated to be of enduring interest to our country. The object was to obtain all the information which the experience of all the silk growers and manufacturers in the U. S. could afford. Questions calulated for this purpose were carefully prepared, and addressed to them in circulars, and extensively published.

Those who could not conveniently attend, were requested to send written answers. One hundred and fifty letters were received, and the most important facts and information extracted, and together with disclosures of those who attended, inserted in a report of the convention, published by Messrs. Saxton and Miles of this city. This forms a pamphlet of inestimable value to our country, and to all who take an interest in this branch of national industry; it is calculated to be eminently useful, as it gives unsuccessful as well as successful experiments. Its uses in preventing ruinous sacrifices by pointing to tried means of culture, and the causes of failure or success, which the detailed experiments make clear, enhances its value to a country comparatively young in the undertaking, more especially as the whole success and profits of the business, depend upon an exact knowledge and delicate management in every movement from the hatching of the worm to the reeled silk. Exact knowledge, united with unremitting care, are absolutely requisite, or the result will be disappointment and loss. The least mistake may prove fatal to the tender insect and blast expectation, and the want of a proper reel, or what might seem a very little deficiency of skill, may render the thread almost valueless. It is stated that from this circumstance alone, (imperfect reeling) the Bengal silk is worth only about one-half the Italian.

The managers recommend the following expedient in relation to bank locks, which excited much interest, and still continue to do so.

It is believed that the regulations now proposed, cannot, with reason, be objected to by any of the competitors.

The Institute shall appoint three of its members, to take the especial charge of all locks left at the Repository, for test or competition; each of which must be accompanied with the name and residence of the manufacturer or inventor, and an agent appointed to explain its construction, &c., if necessary; each lock to be fitted to a box, of convenient portable size, and when left with the committee they are to notify the other competitors.

When any respectable and responsible persons present themselves for the purpose of experimenting upon any of the locks, the committee shall take security to make good any damage or injury, they may occasion. When the operator has sufficiently examined the locks, the committee shall place the box in a private room, lock it, and take charge of the keys.

A register shall be kept of the names of the operators, and the number of hours employed by each, a report of which shall be published in the report of each annual Fair, and the competitor shall be entitled to a certificate setting forth all the particulars and the results.

They also recommend, that the report of the premium committee hereafter be submitted to the board of managers, at least two days prior to the close of the Fair.

From the report of the premium committee, it will be seen that a large proportion of premiums have been awarded to articles exhibited in the agricultural department of the Fair. The great variety of fine specimens of agricultural and horticultural products, and the choice quality of the stock, &c., (although not so numerous as in some previous years,) fully merited all the bounties that have been awarded. This liberal distribution of rewards in this department, is not only justified, but demanded by the bounty extended to us by the State, which, we trust, will be met by the Institute with increased exertions, and a liberal expenditure to increase the interest already awakened to the agricultural department, and to arouse a proper spirit, proportioned to the magnitude of the subject, and which shall bring to view all the advantages of our favorable position for the advancement of this important interest.

Many of the richest specimens of horticulture exhibited at the Fair, were brought from Boston, and its vicinity—a portion of our country decidedly in advance of all others, in this particular.

Some expenditure may be well bestowed in obtaining a larger show of the best trained working cattle, many of which are in the hands of farmers, whose moderate circumstances cannot well afford the expenses attendant on their exhibition.

An elaborate and very full report of the agricultural department of the Fair, made by the gentleman under whose charge it was conducted, accompanies this report.

A provision recently introduced into the by-laws of the Institute, authorizing the admission of suitable persons, who may apply during the time of holding the Fair, to the privileges of membership, has been attended with all the benefits anticipated from its adoption. Ninety-seven applications have been received under its sanction, from gentlemen of the first standing and character, some from among our own immediate citizens, but most of them from distant sections of the country, whose feelings are enlisted and enthusiasm excited by the attractive scenes of the Fair, and whose earnest wishes for its prosperity will not fail to spread the influence of the American Institute, wherever their own influence extends.

Upon the whole the board of managers may congratulate themselves and the Institute on the successful result of their labors at the late Fair. They had indulged the hope, in view of the vast crowds with which our halls were filled the whole of the seventeen days of its continuance, of realizing a much larger amount of receipts for admission, as well to warrant a more liberal distribution of rewards, as to increase the available means of the Institute for the promotion of the great objects for which it was incorporated. They have endeavored to profit by the experience of those who have preceded them, and to guard against the abuse of the privilege of free admissions, without too narrowly contracting the facilities heretofore given to exhibitors, or too strictly limiting the number of invitations. Whilst our receipts for admissions indicate a number less than 48,000 of paying visitors, those who have the very best opportunity for forming an accurate estimate, assure us that not more than one of every five who enter pays for admission. It is computed that there were during the fair about 240,000 admissions at the door. If any thing like a just proportion could be preserved between the paying and the free admissions, the result would be of much greater benefit to the Institute, and afford stronger inducements for the labors of the managers and the large expenditure necessarily required for successfully conducting our fairs.

The managers have also to regret that their expenditure, although less in proportion to the receipts than heretofore, are yet larger than may be deemed absolutely requisite for economically and yet successfully conducting such an exhibition. They have endeavored so to divide the duties and responsiblities of its management as to avoid all expenditure except through their authorized and responsible committees; and in all their preparatory measures, their wishes in this respect have been strictly observed. But during the continuance of the Fair, to meet the thousand emergencies that successively arise, individuals sometimes feel authorized to direct measures involving the expenditure of money, which might be avoided by reference to the appropriate committees, or to the board of managers. The many and arduous duties requiring the constant attention of the managers (and some of them have devoted their whole time to the business of the Fair) must necessarily prevent that close attention to economy which is to be desired, and hence the liability to peculations and exactions for which no remedy has yet been found, and which are anything but encouraging to those who are bestowing their time and services in efforts to build up and strengthen the American Institute in the means of promoting the patriotic objects for which it was created, and who look only for their reward to the general good that is to flow from the success of their labors.

The personal expenses of managers, guests and attendants while engaged at the Fair, have frequently been a subject of complaint. Although somewhat reduced, this portion of our expenditure may still be regarded as larger than is either necessary or proper. It may be urged in extenuation, that much of this portion of our expenses has been incurred without the authority of the board of managers, but has arisen from the over zealous desire of individuals to do honor to the occasion and the institution which they represent.

In conclusion, in order to relieve the managers from some of the onerous duties required for conducting the fairs, and to secure a greater degree of economy in their prosecuion, the board of managers recommend the adoption of some such regulations as the following, viz:

After the report of the board of managers of every fair, it shall be the duty of the trustees to make preparations for the succeeding one; arranging for the place of exhibition, engaging an orator for the aniversary address, and other speakers, appointing judges for the cattle show, and other things preparatory for the fair, which they may deem expedient or necessary, and to report all their doings to the managers at the first meeting after their appointment.

That the practice of providing refreshments at the fairs, chargeable to the American Institute, be abolished, except such as may be required for musicians who may render voluntary service, to be provided by the music committee. That a sum not exceeding sixty dollars be applied for invitations to an anniversary supper, to be got up at some respectable hotel, under the superintendence of the trustees of the Institute, on the last evening of the fair, immediately after the closing address. The said sixty dollars only to be applied in case of a deficiency of receipts from the sale of tickets, to defray the cost of the supper. The number of managers chosen at the annual election not to exceed twenty; the members of committees, (except the premium committee and the committee of arrangements,) not to exceed three. The managers to be informed by a written notice of their appointment, and requested to signify in a written answer their acceptance, or refusal to accept, and in case no answer is returned, or in case of a declinature, others to be appointed instead by the accepting managers. No article should be permitted to be taken from the agricultural room until the close of the Fair, even by the owner, except on the order of the managers, founded on the statement of the superintendent of the room, that the article is in a perishable state, or entered for competition and required for testing by the judges.

Let it not be supposed, from the foregoing remarks or suggestions, that we desire to confine the managers of future fairs within too narrow limits, or restrict them to a penurious expenditure for the purposes of the fair. All that can be reasonably expected is the restriction of contracts to terms that are reasonably proportioned to the services required, and such an abstinence from all unnecessary expenditures as shall demonstrate that no personal object influences any of those engaged in the management of the fairs of the American Institute, further than their interests are identical with the public good—that "all the ends we aim at, are our country's."

Respectfully submitted.

JAMES VAN NORDEN,
Chairman Board of Managers 16th Annual Fair.

Geo. R. J. Bowdown, *Secretary.*

New-York, January 11th, 1844.

(H.)

AGRICULTURAL ADDRESS

Delivered before the American Institute of the city of New-York, during the 16*th Annual Fair*, 16*th October*, 1843.

BY J. E. TESCHEMACHER, ESQ. OF MASS.

A most erroneous opinion has long been prevalent among that class of society attached to the soil, that agriculture is not a calling in which it is easy for a man to rise to wealth or distinguished rank in his country. Hence our agricultural youth are apt to forsake their paternal fields and flock in clusters to populous cities, to enter in crowds what are termed the learned professions, or to fill the stores and counting-houses of the merchant, falsely imagining that these are the high road to fortune and prominence. It is possible indeed, that there may be some semblance of truth in this idea amongst those to whom every improvement in the methods of agriculture practised by their forefathers appeared to be mere innovations, and whose countenances are steadily fixed against all the new fangled ideas introduced into their pursuit by science—with such indeed, distinction or progress is scarcely possible.

But in the present day it may be safely affirmed, especially in this country, that there is no pursuit which more certainly leads to wealth and to distinction of character, no pursuit which more certainly confers that pure happiness dependent on health, freedom, and cheerful spirits, than the cultivation of the soil, if followed in a liberal and enlightened manner with judgment, and with the assistance of that broad light which is now so steadily, so clearly and so abundantly pouring forth upon agriculture.

I believe I may venture to remark, that America is yet behind some other countries in many things pertaining to the great science of agriculture. In this remark I am supported by an intimate and much valued friend who is now travelling in Europe, for the express purpose of instituting inquiry into this interesting subject, and it is to this consideration that I would appeal for the chief strength of my argument. Where we know there is yet much to learn, there is then so much more room for exertion, so much more chance of distinction, so much more certainty of success. It only demands the same exertions which lead to eminence in other professions. We know to a certainty that there is yet much to be learned even by the best instructed in agriculture; and if the tiller of the soil will only exert the same industry and judgment in analysing his soil and in his method of cultivation, in the examination and discrimination of his crops, of his various breeds of animals, which the lawyer does in studying the points of his cases, or the merchant in scrutinizing the qualities of his merchandise, &c. he cannot help ranking high in his career. But this is not all. He must be liberal, aye, profuse in his dealings with his soil and his animals, as well as in his researches after information. He that soweth with a niggard hand cannot expect to reap a plentiful harvest.

There is much good besides in an enlightened and liberal cultivation of the ground. It is not too much to say, that it expands the heart in almost every other good feeling, certainly in kindness to our neighbor, most certainly in gratitude to the great Ruler of the Skies; for it is almost always followed by abundant crops and by prosperity.

If there is any man who stands high in the estimation of his fellow men, may I add with great reverence in that of his Creator, it is the intelligent, the liberal cultivator of the land; it is he, who not only anxious to till his own soil well, is also ready to communicate his experience and knowledge to others; it is he who is not only delighted with the luxuriance of his own crops, but who smiles with pleasure and complacency on the successful efforts of his neighbor; it is he who, far from feeling disappointment in the superior success of a fellow laborer, is always anxious to learn, to improve, and to exert his utmost intelligence in exciting the progress of the important pursuit of his life. Such are the men who ennoble the state of agriculture—who raise the standard of the cultivator of the soil. The more science, intelligence, and indeed all the powers of the mind, are pressed into the service of agriculture, the more sensible will its professors become of its dignity and worth; and in proportion as these mental efforts are crowned with success, which they certainly will be, in the same proportion will these men feel themselves elevated in the scale of human existence, and find their happiness augmented. You will perceive that my earnest desire is to raise in public opinion the tiller of the soil; not only because I am fully persuaded that there is no occupation which conduces so much to the independence, health and happiness of a whole people; but also, because it is sure that unless it is so elevated, and can by that means command the association of superior talent and education, it is not possible to introduce into practice, or even to imitate, the vast improvements which the last few years have given to the agriculture of other countries. What a spectacle, for instance, has been this year exhibited at the various agricultural meetings in England.

Men of the highest classes and character associating freely with all cultivators of the soil like brothers; every one feeling that the common welfare and safety of his country, as well as of himself, depended more on the free development of the resources of the earth, than on any other circumstance. These meetings are proud days for agriculture; the mass of information exposed, exhibited and interchanged, would fill volumes. It is a subject of great congratulation that such meetings are becoming frequent here also. For it must be conceded, that although the information collected at these assemblies may be afterwards condensed and disseminated in a printed form, yet it is quite evident that knowledge of this nature is more readily and clearly acquired when the senses of the eye and ear are engaged, than when the acquisition of it is left simply to the mental exertion of reading. It is quite impossible for us at present to estimate the real value of these agricultural associations and assemblies. There, meet men of various calibre, of all opinions and ideas; the practical farmer and breeder, the theoretical agriculturist, the inventive genius, the scientific and practical mechanic, the student of vegetable economy, as well as the student of nature in its animal forms, the meteorologist, and the observer of times and seasons : and their polar star, agriculture—guided by this they wend their way, each anxious to throw his mite into the common stock of knowledge, and to acquire further information. There, are exhibited the finest specimens of the triumph of the mind of man over mere brute force and passion, in the magnificent breeds of cattle, sheep and swine. One is valuable for its power of draft, and another for its milk; a third for its meat; a fourth for its fat ; another for its wool, &c. Here, on this side, stands the man of science, ready to explain the nature of the various foods on which these animals are nourished ; and to excite to comparison and experiment on that species of food most productive of muscle and sinew, of bone or of fat: willing to expatiate on the nature of milk and the other animal secretions, and to point out the results of researches into the mysterious relation which exists between these and the food or treatment such animals require. In another group may be observed the mind of the mechanic, dilating on the value of various machines and implements of husbandry ; there again is the laborer in chemistry, explaining the nature of soils, their capacities, the value of various manures, and collecting from the practical farmer his results, for the purpose of comparison and further researches ; while another group is discussing the value of various grasses, grains, and other vegetable products—and what, my friends, is the general result of all this interchange ? Scarcely a single man goes home without having learned something useful ; many learn much, others little, but all are gratified ; all look at such meetings, with satisfaction in those that are past, and with hope in those that are to come. What is the final end of this mass of ideas collected in one spot ? It is this—it becomes a matter of history ; these ideas are winnowed out, the chaff is scattered to the four winds of heaven, but the heavy valuable seed is sown in the mind, and produces, some twenty, some forty, and some an hundred fold. Such is the scene I have endeavored faintly to sketch to you, although its results are far more extensive than I can lay before you; for the mere personal introduction to each other of those who attend these meetings is productive of the greatest good. I have been chiefly engaged in my leisure hours in that minor branch of agriculture called horticulture, and have always found that the greatest stimulant to the gardener was the examination of his neighbor's garden ;

his practised eye would always, silently perhaps, but surely, detect where he was wanting, and where he could improve. So at these meetings, farmers are stimulated to visit each other's farms, to view the various processes going on, to take examples from the superior neatness and cleanliness in the barns, fences, tools, &c. &c.

And there is certainly nothing which so much advances a man in the estimation of all around him as order, cleanliness and system in practical farming, nor is there anything in the whole routine of agriculture, more important or finally more productive than attention to these points, emulation in which these meetings are eminently calculated to produce. Permit me, therefore, to impress on your attention the great value of these agricultural associations, and to call on every individual to afford to them his most hearty countenance and support; for there is no pursuit in which every member of the community has so direct an interest as agriculture. The quantity, and what to many in civilized life is of as much consequence, the quality of our daily food is entirely dependent on the successful efforts of the farmer. Within the last ten years there has been certainly considerable improvement in the quality of beef and mutton, and particularly of butter, and not only this but the quantity of these good articles has materially increased, so as to bring them within reach of moderate incomes. In the neighborhood of Boston, for instance, I have observed even within the last two years a manifest improvement in the quality of veal, owing, I believe, to introduction of superior breeds. Almost all these may, I think, be referred to the influence of agricultural meetings and associations; therefore those who are not farmers, in subscribing to and in countenancing them do but increase their own personal and domestic comforts, while at the same time they are benefiting the whole country.

In an address which I had the honor of delivering before the Massachusetts Horticultural Society last year, I detailed a few experiments made by myself with the new manure from the coast of Peru, called guano, which is unquestionably the dung of sea birds that has accumulated there in almost incredible masses, and which owing to its never having been washed by rain, not only retains for ages its wonderful fertilizing powers, but possibly posseses them in a concentrated state.

I think this is a fit opportunity to give the results of a continuation of some of these and other experiments, premising that every operation has been carried on by my own hands; but I would previously remark that about four or five years ago two cargoes of this manure were imported into England, the following season this number was increased to six, and in the twelve months of 1842 and '43, this importation was increased to 40,000 tons, and that the sales in London alone, since last January, have been from 250 to 500 tons weekly; those in Liverpool probably exceeding this amount. I should be quite willing to rest my belief of its immense importance to agriculture on these facts alone, even if I had not my own experience to confirm it, although I am aware that several experiments have been made which have failed. In all those which I have heard of, the failure could always be traced to some error in its application. Some had applied too much, for it is very powerful, and had killed their plants; others applied it in ground already highly manured, its effects were of course scarcely visible ; others had applied it on dry soil at a dry season, when of course there were no means of its reaching the roots in a proper state. In Peru it is always applied just previous to irrigation, for it never rains on that coast.

On the 12th of May last I sowed several hills of sweet corn in a poor, exhausted, sandy soil, putting a table spoonful of guano to each hill of five seeds, without any other manure. I feel sure that this quantity in sowing is two-thirds too much, one teaspoonful would suffice, besides which it was not sufficiently stirred up with the soil, so that when the young, tender sprouts first germinated, they came at once into contact with this most powerful manure, and were considerably injured, turning yellow, and several dying away. Three or four however in each hill, survived and soon began to grow of a dark green color. For the first three weeks I did not observe much difference between these and some adjacent hills in the same soil, which I had sown, also without manure, for the purpose of comparison; when about one foot high I stirred into each hill about three teaspoonsful more guano, and watered all freely, as the weather was very dry. On the 11th of July the tassels appeared, which is about a fortnight earlier than usual. When fit for gathering for the table I exhibited at the room of the Massachusetts Horticultural Society, the largest produce of one seed. It had three principal stems, two of which had three heads each, and one two heads, in all eight heads, besides five suckers, each of which showed the silk; the weight of this plant, the roots being cut off, was 8¼ lbs. At the same time I exhibited the best produce of one seed out of the hills without guano or manure; one stalk showed one head, no sucker, and weighed 1¼ lbs. It is well known by cultivators of this corn that under the usual cultivation it seldom averages two heads to a seed. In my address before mentioned, the view I took of the action of this manure and which I beg leave to state that I deduced theoretically from a consideration of the analysis of its contents, was that it would be more valuable in agriculture than in horticulture, for that it was probable that it would diminish the size of the flower, but that it would certainly increase the produce of seed. I consider the above experiment with sweet corn alone as considerably fortifying these views and I will mention but one other of my numerous experiments; it is purely a horticultural one, but further supports the same theory, which is very important to agriculture.

In February, 1842, I repotted two plants, an old woody one, and a young cutting of Heliotrope, which were in soil entirely exhausted, and in which they had been about 12 months. The exhaustion of the soil was proved by the leaves turning yellow and dropping off as fast as they appeared, as well as by the attenuated appearance of the shoots. On repotting, I merely added a teaspoonful of guano to the same soil and replaced the plants in the same pots. In three months they had both shot out most luxuriant branches, with many clusters of flowers, and on the older and more woody plant, each cluster produced a good crop of seeds, which this plant seldom produces under good common cultivation. This seed and luxuriance may therefore be fairly attributed to the guano. In order to pursue this subject to its furthest limits, I considered it valuable to discover whether any of the ingredients discovered by chemical analysis of this manure, had found their way permanently into the seed of the sweet corn, with a view of ascertaining its importance in cultivation as an improver of the food either for cattle or man. I therefore forwarded a portion of the seed grown with guano, to Mr. A. A. Hayes of Roxbury, to whose valuable discoveries and researches on this subject I have before alluded, and likewise to Dr. C. T. Jackson, who has also interested himself much in these matters.* I myself have repeated Mr. Hayes' experiments with this corn, although I have not been able to separate the ingredients in the seed so as to make a delicate and certain comparison with those seeds grown without guano. Yet according to the judgment of my eye, there is certainly an increase in the phosphate of the seed with guano. If this fact can be clearly ascertained with one ingredient, it may be fairly supposed to be the case with others; and when the researches affecting agriculture now being pursued by numerous able men of science, shall have attained a greater degree of precision and perfection, the importance of a knowledge of the ingredients contained in the various foods of cattle and man will become quite manifest.

One other consideration has suggested itself to me as worthy of notice. In cultivation the choice of fine seed has always been deemed of first rate consequence. If the seed of this first year's sowing with guano has really acquired any more valuable properties than that cultivated without, it is at least probable, from what we already know practically of the laws of vegetation, that these properties may be increased with another year's similar treatment, I have therefore preserved some of this guanoed corn as seed for the succeeding year, when it will be again tried with the same manure.

It is much to be regretted that an import duty of 20 per cent ad valorem is levied on guano. This has just been paid on a small quantity imported into Boston, a good portion of which has by the liberality of Capt. John Percival, of the U. S. Navy, been distributed amongst the members of the Massachusetts Horticultural Society. No doubt, however, that on proper representation being made at Washington, an article of so much importance to agriculture, will be admitted free. I will merely add to these statements, that the quantity of guano I consider desirable for each hill of corn of five seeds, is less than one ounce, to be given in two applications—one-quarter at sowing, this must be well mixed up with the soil, and three-quarters stirred well into the hill when the plant is about a foot high, always endeavoring to effect this latter operation just previous to rain. This would give about 70 lbs. to the acre, supposing it to contain 1,100 hills at six feet apart. The price in England is £10 to £12 or 50 to 60 dollars per ton of 2,240 lbs.: hence the quantity to the acre would cost somewhat less than two dollars, and no other manure is necessary. In England it has been applied at the rate of 250 to 500 lbs to the acre, or more than six times the quantity by the above calculation; but there it is scattered broadcast as the seed is sown, and of course the quantity used must be much greater as all the ground is covered. In the method I propose it is applied as it were simply to each plant. In England nothing is cultivated in hills: it is either broadcast or in drills.

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* Since the delivery of this address I have received from Mr. A. A. Hayes the result of his experiment on the corn I transmitted to him. It is, that the phosphates in the guano corn, are to those in the corn without guano, as 6 to 4. In other words, the guanoed corn contains 50 per cent more phosphates than the other. Now according to the most recent physiological discoveries, it is agreed that without phosphates, neither flesh nor blood can be formed, and therefore, that the food for cattle and man is dependent on the quantity of phosphates it contains.

The facts may therefore be stated as follows: In a poor soil, with guano, at an expense of about $3 per acre, a crop of Indian corn may be raised at least double in quantity to that raised on well manured land; and this double quantity will contain fifty per cent more of those ingredients (phosphates) which are absolutely necessary to the formation of flesh and blood, than the other.

There is, unquestionably, much still to learn on this subject. I am sure I do not pretend to have more than raised the skin of the scientific part of it, but of the great value of guano on poor and sandy soils, under proper application, there cannot exist a doubt.

A remark has been made by some even of high authority in these matters, to the effect that having stimulated vegetation highly by these powerful manures, should the application not be continued, the soil would become exhausted and barren. Now is not this true of any manure, of the best cultivated field in the world? Must not the farmer always use manure? Does he not exert himself to make it as powerful as possible? There is no strength in this objection. The results of many careful experiments made in England on various crops, have been published. They are quite decisive in favor of guano, even compared with nitrate of soda and other powerful fertilizers. Another manure I read of as much in favor there, is Potter's artificial guano, composed chiefly of the same ingredients as chemical analysis has shown to be contained in the South American guano. Therefore, should the cheap natural source in Peru fail, science has shown how its place can be supplied, although I fear at rather a more costly rate.

Dr. C. T. Jackson, of Boston, has also compounded a manure in which I potted some plants on the 16th of September last, with accurate measures of quantity, for the purpose of comparison with guano. Just 30 days from that period, the vegetation had commenced most vigorously, I think more so even than with the other. I should mention also that there are different qualities of South American guano. I had put aside samples of two lots, but in the hurry of my departure from Boston, I omitted bringing them with me. One is of a light brown snuff color, the other is darker. It is said in Peru that the darkest is the most powerful, and it seems to me that this is true; as the darker has a more powerful odor: however, I have instituted parallel experiments with both, and shall be able in the spring to speak of it with more certainty. But I must have exhausted your patience on this subject, and will therefore proceed to touch on a few other points, where it is probable that science may be of essential service to agriculture. About two or three years ago, I wrote a letter to the New-England Farmer, to the effect, amongst other things, that I should not be satisfied with agricultural chemistry until it had succeeded in analysing correctly a given spot of soil previous to sowing the crop; analyzing it again after the crop was gathered, and then analyzing the crop itself. These would probably throw more light on what the crop has taken away from the soil, and hence would be evident what addition ought to be made to renovate it. Although this appears very simple on paper, yet a little reflection will show, that it is an experiment requiring the greatest care and forethought, as well as numerous trials on similar crops in dissimilar soils, and with various manures to lead to information of the desired weight. But I have seen with much pleasure in some late publications from England, that this idea has also struck some of the agricultural experimenters there, and I doubt not that these desirable investigations will now be undertaken.

It is well known among agriculturists that the use of lime has undergone considerable discussion; some asserting it to be of great value, others having found it of little or none. If lime be added to the manure heaps, one of its chief effects is to set free that substance so indispensable to vegetation, called ammonia; the odor of this is so strong that any farmer may satisfy himself on the subject by adding a spoonful of lime to a little manure. Now, abundance of ammonia is necessary for a crop to grow luxuriantly: suppose a soil formed in a limestone region; it will of course contain plenty of lime, from the disintegration of the rock of which it is composed. When the farmer's annual deposit of manure is worked into the earth, there it always finds enough lime to liberate all the ammonia it contains. But he, knowing nothing, either of the composition of his soil or of the action of the lime, reads that some farmer at a distance has used lime with great effect, and applies it, thinking it must be a good substitute for manure; he is disappointed, and throws the fault on the lime. Take now another soil, for instance, in a granite region, containing naturally a very little lime, which has been annually well manured. The whole of these annual deposits is certainly not exhausted by the crops which have been taken from the ground; there is no doubt much of it lying decomposed. Lime used freely on a soil like this would prove of the greatest advantage—to use a simple phraseology, it would search out the undecomposed manure and extract its valuable ingredient, ammonia, for the use of the crop. Here, then, the farmer would find lime most valuable.* It is, then, generally from ignorance of accompanying circumstances that such differences of opinion arise.

The practical applications of science to agriculture, however, is yet in its infancy, but every year develops new ideas, and every successful result arising from its application, produces new proselytes to the opinion of its great value, and new students of its powers. England, with all its agricultural energy, is, I believe, yet far behind China in the quantity of its extracts of food from the soil, at least if we may judge from the much denser population which finds subsistence in this latter country. It is a great stimulus to know that we have yet much to learn, and hence it is unquestionable that if a man presses forward in agriculture, particularly in this country, he cannot fail to signalize and advance himself, as well as to benefit the land of his choice or of his birth. It would be unjust as well as impossible for me to deliver an address on agriculture, without paying a passing tribute to the man who has in our day given rise to the more intimate union of agriculture and science; I mean Professor Liebig. It is at this moment rather the fashion amongst some, to decry his works—but although many of his minor positions which when he wrote were considered generally as axioms of the day are now found to be unsound—and although from the small period of twelve months which was given him to prepare on a subject for which ten years would hardly have sufficed, his works are therefore not written with the necessary precision it required—yet his main principles of the absorption by vegetables of ammonia and carbonic acid from the atmosphere, as also most of his broad assertions, must and will remain true. As well might they attempt to rob Milton of his fame, or Washington of his glory, as to take from Liebig the honor and merit of having by sound views and original investigation, determined the action of science towards the improvement of the most important occupation of man, AGRICULTURE, with an impulse which in its effects will be felt for ages to come.

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* It is not intended to be asserted, that this is the only, or even the most important general action of lime on the soil; we have much yet to learn ere we can come to perfectly satisfactory conclusions on this subject.

The time allotted to an address will not permit me to enter into the subject of other substances proposed as manures, such as nitrate of soda, poudrette, ground bones, lime, charcoal, &c., on which I have experimented for the last two or three years, although not on a very extensive scale. I have learned from these sufficient, however, to assure the farmer that there is scarcely a soil existing, from the almost pure land to the stiffest clay, which cannot, by proper application, be made to become fertile, and richly to repay the labor expended thereon, but there must be mental as well as bodily labor—each farm demands its own separate study—some spots require the assistance of drainage, others are improved by irrigation. In all, the intelligence as well as the industry of its owner must be called into active play. Nor can I at all enter into the question of the value of different grasses—a subject of much interest to the farmer, and in which something has yet to be done in this country.

But one other subject remains which I wish to mention ere I conclude. I have spoken of guano and of lime. I have lately seen an implement invented this year by Mr. Isaac Clapp, of Dorchester, Mass., which he calls, properly, a pulverizer. It is certainly an implement of much merit, and has given great satisfaction at the meetings where it has been exhibited, as well as to individuals who have seen it operate, and in whose judgment I have the highest confidence. It is a roller, loaded as heavily as is judged proper; behind this is a moveable frame, of a simple construction, managed with the hand by means of two handles. This frame is armed below with a number of strong knives, about four or five inches long. As the roller passes along, the knives are pressed into the soil by the hand, the roots and clods are cut to pieces, and the earth is beautifully pulverized, as if it had been done by spade husbandry. In case of meeting with stones, or other impediments, the frame is lifted up, and passes over without trouble. This machine appeared to me so very well suited to this purpose, that I persuaded Mr. Clapp to have a model made, which I forwarded three months since to Mr. Coleman, in England, as a specimen of Yankee ingenuity to exhibit. I have not yet heard from him on the subject.

I do not mention this machine for the purpose of puffing it into notice, for it is of so simple a construction, that Mr. Clapp has no idea of reaping any benefit from it; but since I began writing this address, I have learned of its very satisfactory action at a meeting near Worcester, and while listening to the account an idea struck me, which, as I have not seen Mr. Clapp, I have not communicated to him; it is, that it would be a most excellent machine for incorporating into the soil guano, lime, nitrate of soda, or any other of these manures which are spread broadcast over the surface, and need some implement to put them slightly under the soil until wanted by the crop, that their virtues may not be wasted in the desert air. I am very sure the points of agriculture which I have here introduced to your notice have been very imperfectly dealt with, and many remain of course altogether untouched, but time warns me. I will therefore conclude by imploring every one engaged in this pursuit to take science by the hand, to employ the leisure hours of winter in obtaining a knowledge of some of its general principles, in attaining its habits of discrimination, in schooling the mind to its system of order, and to apply these steadily in experimenting on a small scale; for it must be understood, that unless experiments are made with the note-book in hand, with careful and constant examinations and observations made and noted, they are more likely to mislead than to be useful. Such observations must include every circumstance at all calculated to affect the result—as soil, situation, weather, &c., &c., the same may be said respecting experiments with cattle, their food, &c., &c.

When the time arrives, and come it will soon, that the majority of agriculturists shall have attained considerable theoretical as well as practical knowledge on the subjects, then will come the time to which I have before alluded. Agriculture will shine forth as the most honorable and profitable occupation of mankind; its professors will be looked up to as a straight forward, sturdy, independent class of men, constantly in the habit of exercising and maturing their powers of reasoning and judgment, men of a high state of education and of general information, from whom might be with confidence selected those fit to rule this or any other country. I am far from meaning even to insinuate that such is not in some degree the case now, but I look forward to a time when men of college education will turn to the plough as they now do to the learned professions, nay, and I may as well state it here, to the time when their will be either colleges for agriculture in every State, or agricultural professorships in every college in the Union. A few years, yes, my friends, a very few years will elapse ere the importance of extensive and solid theoretical, scientific knowledge to the agriculture of a State will become so apparent that appropriate places for youth to study these things will, like railroads, be simultaneously established every where, and a college education will be as requisite for the cultivation of the soil as it is now for medicine, law, or religion. Then, and then only, shall we see agriculture take its proper stand in the nation. Then shall all feel it is honorable and certainly more useful to wield the plough and the reaping-hook than the sword and the gun, and to such a time do I wish the foregoing observation to extend. That those who follow agriculture having *necessarily* received the liberal general education such institutions secure, will then be more universally fitted than even now to fill with honor and success the highest offices which can be bestowed on them by their fellow-citizens.

(I.)

REPORT

Of the proceedings of the National Convention of Silk Growers and Silk Manufacturers, held in New-York, October 13*th and* 14*th* 1843.

New-York, *Oct.* 12, 1843.

A large number of gentlemen interested in the culture and manufacture of silk in this country, assembled this day, at half past 10 o'clock, A. M. by virtue of the following circular letter, issued by the trustees of the American Institute.

SILK CIRCULAR.

American Institute,
New-York, *August* 28, 1843.

Sir: The American Institute of the city of New-York, a State institution for promoting agriculture and the arts in the United States, is desirous, for beneficial public purposes, of obtaining information respecting the progress and condition of the culture and manufacture of silk, and the growth, quality, &c. of the mulberry in the United States. For this purpose we have invited a *general convention of silk growers and manufacturers* from all parts of the United States, to meet in New-York on the 12th and 13th of October next, during the Sixteenth Annual Fair of the Institute. A conspicuous place will be provided for a full display of American silks, and extraordinary efforts made to procure such a display. The statistical returns of increasing quantities the last few years, together with very favorable results in feeding the present season, as far as we have had opportunity to learn, brings us inevitably to the conclusion, that this precious commodity is destined soon to rank with cotton and wool in its importance as an American staple. For the purpose of accurately ascertaining the present condition and the future prospects of this branch of domestic industry, every silk culturist and manufacturer in the Union, is invited to attend, and bring their best specimens, with all the correct data at their command; from which a report will be compiled and distributed through the country, that will, we trust, for ever settle the question in favor of the cultivation of silk in the United States. We call upon all silk culturists and manufacturers to aid in this laudable object. The cry is from all quarters loud and often repeated :—" Give us a new staple to diversify labor, and new employment for that which machinery has displaced, and consummate our practical national independence."

In the growth of silk we have an article providentially adapted to all our varied soils and latitudes, well calculated to counteract sectional selfishness, and to produce a harmonious moral influence; and the vent for it in the markets of the world will exceed our abilities to produce for centuries to come. Let us, if the silk culture and manufacture are feasible, and can be made to remunerate, advance at once to the point required. And how can this be better ascertained than by a collection of facts, by means of the coming exhibition and convention?

We are happy to know that the New-England Silk Convention is appointed to meet at Northampton, Massachusetts, October 4th, and we would respectfully suggest to the friends of this cause in Ohio, Kentucky, Tennessee, and other States, that they hold *county* and other *local* conventions, at the same time, or previously; and collect all the facts possible, and forward them to be embodied in the *general report.*

We earnestly urge, that every *silk-grower* and *manufacturer* furnish a written statement, as desired. If you cannot attend the convention, send by mail. Do not decline because your operations are *small*, or because you may not be accustomed to writing; *small experiments, as well as large ones, rightly conducted, settle general principles;* and any errors in writing which we may discover, the convention will correct: *only give the facts.*

.To aid our correspondents, we present two series of questions to be answered. If you are a silk grower, we ask as follows:

1. How long have you fed worms? and what have been the *general results* each year?

2. What kind of a building do you use? and how is the temperature regulated, if regulated at all?

3. Have you ever fed in an *open shed* or *tent*? If so, state the results.

4. What variety of silk-worm do you prefer?

5. What kind of trees do you use, and how do you manage them?

6. Have you tested, and found any difference, between early and late feeding?

7. Can you state the cause or causes of bad success in feeding, in any case or cases, among your acquaintances engaged in the business?

8. Have you tested the use of the mulberry leaf, in its green or dry state, for paper? If not, will you do it this season, and communicate to us the results?

9. Have you tried any process, by water or dew-rotting, to separate the bark of the young mulberry shoots from the woody fibres, so as to convert it into paper or silk fabrics? If not, will you do it the present season, and communicate as above?

10. Any other information on any part of the silk culture, or any suggestions on the general subject, will be thankfully received.

If you are a manufacturer, please answer as follows:

1. How long have you been engaged in manufacturing silk?
2. What varieties of silk goods do you manufacture?
3. What amount of raw silk do you work up annually?
4. What amount of capital have you invested in the business?

5. What number of hands—male, female, and children—do you employ?

6. As a manufacturer, what is your opinion in regard to the quality of American raw silk, properly reeled, compared with the foreign article?

7. As a manufacturer, what is your opinion as to the comparative quality of the silk made from the different kinds of trees in common use; the Multicaulis, Cantons, Asiatics, Broosas, Alpines, Italian whites, and the native American mulberry.

8. In the present tariff on silks, are any modifications needed in order to make it answer the designs contemplated in establishing it?

9. What are your views in regard to the whole silk business as a permanent branch of American industry? Is the enterprise feasible?

In conclusion, we earnestly press this whole subject upon your attention. Come to the convention. At least, send us specimens of your labors, and the *facts* which we ask. To every person who will give a written statement, as desired, and to every editor who will publish this circular, sending us a paper containing it, we will send a copy of the contemplated report.

By order,

James Tallmadge, *President.*
Adoniram Chandler,
William Inglis, } *Vice-Presidents.*
Shepherd Knapp, } TRUSTEES.
T. B. Wakeman, *Corresponding Secretary.*
G. J. Leeds, *Recording Secretary.*
E. T. Backhouse, *Treasurer.*

In pursuance of this call, a highly respectable convention assembled. Dr. Daniel Stebbins of Northampton, Mass., was called to the chair, and James Harrison, Esq., of New Haven, Conn., appointed secretary, and the following roll of delegates made out.

Charles Henry Hall, *Harlem, N. Y.*
S. Church, *Bethlem, Conn.*
Charles B. Crafts, *Woodbury, Conn.*
Horace Pitkin, *Manchester P. O., Conn.*
Return J. Meigs, *Augusta, Geo.*
G. W. Murray, *Paterson, N. J.*
Timothy Smith, *Amherst, Mass.*
Oliver Pierce, *Elizabethtown, N. J.*
Oliver Mitchell, *South Britain, Conn.*
Robert Wentworth, *Centre Buxton, Maine.*
James A. Stetson, *Northampton, Mass.*
Joseph Conant, *Northampton, Mass.*
Ephraim Montague, *Belchertown, Mass.*
William Robert Prince, *Flushing, L. I.*
Jacob Pratt, *Sherburne, Mass.*
J. Danforth, *New-York.*
Holly Bell, *Darien, Conn.*

Aaron Dean, *Stamford*, *Conn.*
James C. Church, *Poughkeepsie*, *N. Y.*
Benjamin W. North, *Poughkeepsie*, *N. Y.*
Fr. Ehrenfels, *Philadelphia*, *Pa.*
Dr. Daniel Stebbins, *Northampton*, *Mass.*
James Harrison, *New-Haven*, *Conn.*
J. R. Barbour, *Oxford*, *Mass.*
Gen. James Tallmadge, *New-York.*
Henry Meigs, *New-York.*
Gideon B. Smith, *Baltimore*, *Md.*
Thaddeus B. Wakeman, *New-York.*
J. R. Walter, *New-York.*
Edward Clark, *New-York.*
John O. Choules, *New-York.*
F. Trowbridge, *Flushing*, *L. I.*
C. Colt, Jr., *Dedham*, *Mass.*
Samuel M. McKay, *New-York.*
A. P. Waite, *Troy*, *N. Y.*
E. Cornell, *Ithaca*, *N. Y.*
Nathan Rixford, *Mansfield*, *Centre Conn.*
J. Dimock, " " "
Hugh Maxwell, *Rockland Co.*, *N. Y.*
Cornelio D. Sebring, *New-York.*
Alfred S. Prince, *Flushing*, *L. I.*
Dr. Smith Cutter, *Shrewsbury*, *N. J.*
L. Provost, *North Hempstead*, *L. I.*
S. F. Norton, *New-York.*
Thomas Dale, *Mansfield*, *Conn.*
John Denmead, *New-York.*
G. M. Haywood, "
Edward F. Woodward, *New-York.*
P. D. Mandelaer, *Schenectady Co.*, *N. Y.*
N. J. Church, *Minisink*, *Orange Co.*, *N. Y.*
George Bacon, *New-York.*
Cornelius Bergen, *New Utrecht*, *L. I.*
George Sullivan, *New-York.*
R. Lockwood, "
Samuel Stephens, "
G. C. De Kay, "
John W. Gill, *Mount Pleasant*, *Jefferson Co.*, *O.*
Ab. Clark, *New-York.*

Messrs. Meigs, Smith and Barbour were appointed as a nominating committee to present a list of officers for the permanent organization of the convention.

On motion of a member, convenient seats were provided at the table for reporters of the public *press*. And the reporters of the Tribune, Express, Herald, and Commercial Advertiser, availed themselves of the courtesy.

The nominating committee reported as follows :

For President—Gen. JAMES TALLMADGE, of New York.

For Vice-Presidents—John W. Gill, Esq., of Ohio. ; Dr. D. Stebbins, Massachusetts ; H. Pitkin, Esq., Connecticut ; G. W. Murray, Esq., New-Jersey.

For Secretaries—James Harrison, Esq., of Connecticut ; Jacob C. Parsons, New York.

The following gentlemen were appointed the business committee of the convention :

Messrs. Barbour of Massachusetts, Smith of Maryland, Gill of Ohio, Conant of Massachusetts, and Danforth of New-York.

General Tallmadge (upon the election of the above officers,) took the chair, and made some very interesting remarks upon doing so. He would gladly have had another elected to that office, but would, being so honored, do his best to meet the wishes of the convention.

This was the first national silk convention ever called in this country, and its object was to take into consideration the expediency, as well as the possibility, of making silk one of the staples of the country ; to ascertain whether its culture be or be not congenial to the soil, and then to advise those engaged in the matter to go on with it, if not, to cease their labors. And in these ways the convention, in his opinion, would be able to do a great deal of good.

Gen. T. then went on to express the opinion that, not only in one part, but in all parts of the United States, the climate and the soil of the country were most admirably adapted to the culture of the silkworm. And he described the climates of England and the United States, in contrast, as adapted to this culture, and showed to what different uses the mulberry was put in the two countries. This fruit in England grew to a large size, as large as a shell-bark, and was a rich, luscious fruit for the table. It never grew to such luxuriance here ; the climate was less favorable to the raising of the fruit, but from the same causes, most favorable to the culture of the silk worm.

The speaker gave a very interesting detail of the mode of raising the worms—the way in which the process of hatching goes on. He explained the mode adopted by some of hatching on paper, by the aid of the warmth of manure, or by contact with the body, &c. He alluded to the statements in the books as to the way in which the process of hatching goes on, all over the world. It would seem that eveywhere, excepting in this country, artificial means are uniformly resorted to. In this country, we need no such means. Natural facilities, in atmosphere, soil and every other appliance, abound with us, and are solely and exclusively furnished by Providence to this country. All that is needed is the enterprise and industry of the people to bring silk into the list of American staples, by acquiring the fullest knowledge of the means of feeding the worms, and all the other facilities for the production of silk. The end and aim of this convention, the speaker insisted, are of a kind which ought to recommend it to the favor of all American citizens. Instead of sending money out of the country, and for the purchase of what we can so easily make ourselves, and then sitting down, wondering where our circulating medium had gone, the

General would advise his countrymen to enter into this enterprise with vigor, to go to work like patriots, and to improve the advantages which God and Nature had put into their hands for the production of a new staple, and one that it was fully demonstrable, must eventually turn out a rich source of national wealth.

He took occasion to say that it had been proved to his satisfaction that with care, *two* crops of cocoons could be obtained in one year, and made some interesting suggestions to this end, in the matter of feeding. He expressed a decided preference for feeding with *branches* over the *leaf*.

General Tallmadge, in conclusion, explained his meaning in the speech lately delivered at the Institute, with regard to the custom in France of women hatching the worms from the egg, on paper placed in contact with the skin. One of the papers had reported him to have said that this was a coercive process, imposed by the employer. He had not intended to give any such idea. He had represented this mode as one among the many adopted by the people in that country for the hatching of the eggs by artificial means.

The business committee then presented a great number of letters from persons engaged in the silk business, from a large majority of the States in the Union, containing a host of very instructve and valuable facts, based on the experience and observation of the writers in the prosecution of the work.

A communication from a large New-England convention, recently held at Northampton in Massachusetts, tending to produce the same impressions in the public mind, was also read by the first vice-president. This communication was ordered to go upon the files, and to be published with the doings of this body, and is as follows:

The second annual meeting of the New England silk convention convened at Northampton, Oct. 4, 1843.

The convention was duly organized by choosing the officers designated by a nominating committee. Hon. EDWARD DICKINSON, of Amherst, Mass., was elected President; Dr. DANIEL STEBBINS, of Northampton, and Rev. JOSEPH FIELD, of Charlemont, Vice-Presidents; Henry Kirkland, W. A. Hawley and A. W. Thayer, of Northampton, Secretaries. Dr. Daniel Stebbins, Treasurer.

The letters which had been received from persons residing in widely distant parts of New-England, and beyond the limits of New-England, all express one sentiment and one opinion in regard to the importance and feasibility of the silk culture. These letters were numerous and highly interesting to silk growers, expressing full confidence in the system of *early* and *open feeding*, and the most firm conviction that the silk cause will be crowned with complete success.

Several gentlemen addressed the meeting, detailing their own experience since our last meeting, and fully sustained the *leading operations* of the year—*open* and *early* feeding.

Dr. Daniel Stebbins, Professor Adam, and A. W. Thayer, were appointed for the purpose of procuring an address to be delivered at the next anniversary, if in their opinion it should be thought expedient.

Dr. Daniel Stebbins, and J. R. Barbour, Esq., were appointed a committee of supervision, for the year ensuing.

Dr. Daniel Stebbins, Samuel Wells, and A. W. Thayer, having been appointed to present resolutions for the consideration of the convention, made the following report, which was read, discussed, and unanimously adopted:

1. *Resolved*, That the general and widely extended distribution of the last year's report, has awakened an interest in favor of the silk cause exceeding our most sanguine expectations.

2. *Resolved*, That this convention very highly appreciate the favorable notice which the American Institute has taken of the silk cause, and that we regard the efforts they are now using, as signally auspicious of happy results.

3. *Resolved*, That in view of the experiments already made, we feel assured that our soil and climate will produce silk in abundance, of the very best quality, and equal to any imported: and that the United States have all the facilities for becoming a great silk growing country.

4. *Resolved*, That the people of this country, can raise and manufacture all their own silks, as easily as their own cottons and woollens, and as rapidly as Mulberry trees can be multiplied; provided the *early* and *open system* of feeding be adopted.

5. *Resolved*, That with a view to encourage the culture of silk more extensively, a reasonable State bounty on cocoons and reeled silk is desirable. We therefore recommend that measures be adopted to procure the passage of laws for that purpose, in those States where such laws do not already exist.

6. *Resolved*, That this convention appoint delegates to attend the National Silk Convention, to be holden in the city of New-York, on the 12th and 13th days of this month, and present to the trustees of the American Institute, the returns which have been received by this body from silk growers, to be at the disposal of said managers, and also to represent our views and feelings on the silk subject.

7. *Resolved*, That the silk growing enterprise is deserving the patronage of every State in the Union, and that the cause would be essentially promoted by the formation of State and county silk associations throughout the Union.

8. *Resolved*, That the next annual meeting of this convention be held at Northampton, Mass., on the first Wednesday of October, 1844.

The following persons were appointed delegates to the National Silk Convention, to be holden in the city of New-York, on the 12th and 13th days of October, 1843, pursuant to the sixth resolution.

J. R. Barbour, Oxford, Mass.
Daniel Stebbins, Northampton, Mass.
Joseph Conant, " "
J. A. Stetson, " "
Ephraim Montague, Belcherstown, Mass.
Timothy Smith, Amherst, Mass.
Leonard Barton, Gill, Mass.
D. W. Dexter, Claremont, N. H.
E. M. Hollister, Brattleboro', Vt.

Horace Pitkin, Manchester, Ct.
James Harrison, New-Haven, Ct.
Adjourned, sine die.

JOSEPH FIELD, *Vice-President.*

Harvey Kirkland, }
A. W. Thayer, } *Secretaries.*
W. A. Hawley, }

The business committee proposed to introduce a series of resolutions in the afternoon session.

Gen. Tallmadge, the president, in the name of the Institute, invited the Convention to visit the Fair, and inspect the specimens of silk, and silk goods which were there, with all the other numerous and varied exhibitions of American skill and genius.

The convention then adjourned until four o'clock, P. M., and went in a body to Niblo's, in pursuance of the invitation of the American Institute.

Afternoon Session.

Gen. Tallmadge, the chairman, called the convention to order at the hour appointed, (four o'clock.)

Dr. Stebbins, of Mass., made some interesting remarks upon the practical working of the manufacture of silk, especially in the raising of worms.

Judge Meigs, of New-York, presented a paper on the silk business in France, which was ordered to be printed with the minutes; and is as follows:

" I have noticed the late movements in France on the silk culture.

In 1836, *La Société Séricole*, (Silk Culture Society,) was founded. At the General Assembly in December, 1840, reports were made on the progress of silk industry.

It appeared that ladies had assumed important stations in the new enterprise.

Mademoiselle Peltzer was at the head of one of the most important societies, that of Lavaur. That *Madame Delaforest* had made one of the most valuable experiments. She had produced 30 lbs. of silk from 300 lbs. of cocoons. (We have in this country done more than that, H. M.) Linch de Latour had founded a cocoonery for 200 ounces of eggs.

Eugene Robert was decorated with the *Legion of Honor* for his *silk works!*

France has discovered that the worms must be fed on leaves from the first bud to the old leaf. Young worms do not prosper on old leaves, nor *vice versâ*. France has discovered that *ventilation* is a *sine quâ non*. That multicaulis is best. A general ardor in the pursuit of the silk business is felt in France.

Medals are given to cultivators, &c.

Emile Beauvais raised 72 lbs. of cocoons from 1,000 lbs. of leaves. The *Marquis Amelot* distinguishes himself for zeal and taste in silk works.

H. MEIGS,
Member of the American Institute.

Oct. 12th, 1843."

Mr. Barbour, of the business committee, reported from that committee a series of resolutions, having reference to the culture and manufacture of silk.

In the discussions arising upon them, as they came up for consideration, many members made remarks upon the feasibility of very speedily bringing the business into popularity and active operation. It was not, as had been alleged, "all moonshine,"—and the president made a few remarks in favor of an amendment, offered by himself, to the effect that the disrepute and distrust into which the business fell, some three years ago, was the work of brokers and speculators, who had engaged in the purchase and sale of mulberry trees, cuttings, &c., with no intention of growing or manufacturing.

A debate also arose, in the course of the discussion of these resolutions, in reference to the fact that, under a provision of Congress, in the passage of the tariff act, to import "silk in the gum," at a low rate of duty, frauds had been committed, by importing silks (on which the duty is $2 per lb., instead of 50 cents, the duty on the gummed article.) The committee were instructed to report on this subject to-morrow; and then the convention adjourned until to-morrow at 10 A. M.

EVENING.

The Saloon in the Garden, in the evening, was thronged with visitors—and at half-past seven, agreeably to previous arrangement, General Tallmadge introduced the speaker of the evening, MR. BARBOUR, from Massachusetts; a practical silk grower.

The assemblage were deeply interested in the remarks made by the speaker, and frequently interrupted him with warm shouts of applause.

His speech, as given by the city reporters, was substantially as follows:

Mr. Barbour said he would address himself to the task assigned him without any apology or introduction. He would endeavor to convey to the minds of his audience the impressions and convictions, which experience and practice had deepened in his own, as to the feasibility of cultivating the silk-worm in this country.

And *first*, he would say as a matter of fact, distinctly proved beyond all doubt, that it can be done. The plain Saxon words *can* and *can't* had applicability to this subject. He would lead off his hearers on no false track, any more than he would himself He was satisfied of the truth of his position. The feasibility of this enterprise was durably fixed in his own mind, and it was his purpose to do something towards impressing it as forcibly upon the minds of those who heard him. The question is, *Can we raise silk in this* *country?* He would say that there were the most abundant proofs that we can do so. He adverted to the fact that in the early history of the country this had been demonstrated. The culture of silk was well known in the Colonies (now the United States,) before the Revolution. Georgia, Virginia and Pennsylvania, had successfully demonstrated its feasibility. New-England, also, had even then done the same: and far-seeing men of that time, such as Dr. Franklin, Dr. Styles, President of Yale College, and others interested patriotically in the subject, had done much towards the promotion of the business.

From 1740 to 1790 hundreds of pounds of excellent silk were grown in the southern, middle, and New-England States: and in the old town of Mansfield Conn., the business became permanently established, and has continued to the present day.

But the question very naturally and very properly, here comes up, How did it happen that it was generally abandoned? My answer is, that the population of the country was sparse—the Revolution coming on, of course, broke up the business for the time—and the people of the south became absorbed in the cotton culture. But the *one*, the *great*, the *all-controlling* obstacle, was the want of a *home market* for cocoons and raw silk. Such a market was not created, because the popular sentiment of the country was opposed to home manufactures of every kind. The received doctrine of the country, even down to 1816, was that we were to be an agricultural, and a commercial, but not a manufacturing people.

But the tariff law of 1816 settled the policy of the country in favor of domestic manufactures. A new order of things came up. The cotton business soon became fully established. Then the woollen business, under subsequent modifications of the tariff, became established. And thus, *a manufacturing spirit*, as the spirit of the country, was generated. We no longer heard the old song, that agriculture and trade were the only pursuits befitting our circumstances and our genius as a people.

In this way the whole silk question, growing and manufacturing, was again called up, as a permanent branch of American industry. As early as 1826, Congress began to call public attention to the subject, and between that date and 1838, several documents of great value were issued by that body. Several of the States issued similar documents, and offered also liberal bounties upon cocoons and raw silk.

But the cause has had peculiar difficulties to surmount: some growing out of the nature of the business itself, as a new business—some out of the prejudices of the ignorant—some out of the indiscretions of its friends—still more out of the operations of unprincipled speculators in mulberry trees.

Yet the progress of the business has been onward, especially for the last two or three years. To prove this, he would send the auditory to that part of the gardens in which the silk manufactures were exhibited. He would send them also the returns of our State treasurers; showing the increasing bounties paid out from year to year—each year just about doubling on the preceding year. With still higher measures of satisfaction, he would refer them to the documents lying on the tables of the convention now in session—documents detailing the careful experiments of from one to two hundred men from about all the States in this Union ; and showing that hundreds of bushels of excellent cocoons have been grown the present season, upon our own soils, and under our own suns and showers.

Can we then make silk ? Yes by the testimony of the *past*, by the testimony of the *present*, the fact is established beyond cavil or dispute, that we can raise silk and manufacture it too. (Cheers.)

My *second* remark, said Mr. B., is that our silk *in the state in which the worm leaves it*, or when properly reeled, is a decidedly superior article.

Dr. Franklin first proclaimed the superior quality of silk of American growth, and subsequent experiments have fully corroborated the assertions of that noble man. This fact is proved from the high value which well reeled American silk enjoys in the market over foreign silk. You have it also in the testimony of American and foreign silk manufacturers, as embodied in the first report of the New-England silk convention. You will see the same fact abundantly attested in the returns to this convention now lying in that pile upon our table, and which will soon be given to the public in our report.

But what does this well established fact prove ? Why, surely, it proves the superiority of the climate and soil of our country for the silk culture. (Cheers.) Yes, it is climate and soil which determines the characters of all our productions, our vegetables, our grass, our grain, and our Green Mountain boys ! (Cheers)

I remark, then, that in open field culture, you cannot get a product of *first rate* quality, only where soil and climate are congenial.

Try it in regard to all our grains, wheat, corn, rice, oats, &c.; try it in regard to vegetables, in regard to flowers, in fruits, in regard to grasses ; in fine, in regard to every thing that grows on the face of the earth, and you will find it an immutable law of the physical world that soil and climate determine the quality of the product. So much so, that where these are unpropitious, no measure of science or skill can supply the want.

In this connection, I remark, also, that the climate of our country approximates closely to that of China, in the same parallels of latitude —our geographical position is similar to that great country—the boundaries of our sea and land are like theirs, and our prevailing winds in the summer, are like theirs—land winds. The dry, warm atmosphere of both countries, is well adapted to the growth of silk. In fact, to say a great deal in a few words, this and China are the only legitimate silk growing countries. (Cheers.) In Europe, artificial means can only give to the eggs the forwardness which the natural atmosphere here gives. Throughout Europe the question is, how shall the eggs be hatched? Here it is, how shall they be kept back until we are ready for them ? (Cheers.) I refer to these general facts to show you on what the guarantee of the silk grower is based in this country.

My *third* general remark said Mr. B., is that under a wise arrangement of impost duties, we can make our own silk goods cheaper than we can import them.

I draw this inference from the history of the past. It has been found to be true in regard to everything else—cottons, woollens, iron, and everything to which American ingenuity has been directed : and pray tell me, why not in regard to silk?

But I hear, for ever, the old story—the story that we cannot compete with the cheap labor of India, and China, and Europe, in the silk business. There, it is said, laborers can be had for a few cents a day; and it is of no use to try to compete with them. In reply, I would say, 1st, that *labor is always to be estimated, not by what it costs, but by what it can be made to produce:* and 2d, that the cheap labor of China and India is just as available for the cotton business, and other branches of industry, as for the silk business; and if we can compete with it in cotton, &c., why not in silk?

Can we not compete with that cheap labor? It is already done. Under the fostering care of our own government, in the infancy of our manufactures, we have already done it, and done it triumphantly. What a triumph has America achieved! Do we want proofs? Go, move within the small space protected by this sheltering roof, and there examine for yourselves the product of the loom, the forge, the workshop, and the bench. (Cheers.) My heart swells while I point you to those noble efforts of our common countrymen. I was born, sir, under the morning shadows of the Green Mountains, but I am an American; and never did I feel the proud boast of an American citizen as at this moment, when within the sound of my voice I can point out to my fellow-citizens the onward progress of our glorious Republic. (Loud and continued cheers.) Those cheers delight my old New-England heart. I glory in the enthusiasm which burst around me to-night, and ascribe its sincerity to the great topic of the day—OUR COUNTRY'S GLORIOUS ELEVATION! (Loud cries, cheers, and shouts of go on, New-England, go on.) In my recollection our countrywomen had to pay from 25 to 40 cents per yard for coarse, sleezy cottons, which now you could not palm on them even as a gift. No, they would rather consign them to the paper mill, and go to the shops and buy an article worth something. (Loud cheers.)

How has all this change been brought about? American skill, and enterprise, and perseverance, have done it—have driven these sleezy *hum hums* of olden times, and foreign lands, from our markets, and supplied a better article, at one-fourth the expense. And not only this; we are now shipping to India and China cotton goods to supply *their* markets—carrying our cottons right home to the very birthplace of the cotton culture, and the cotton business—all their cheap labor to the contrary notwithstanding. To other countries beyond the ocean, we are shipping goods. In England, France, China, and in Asia, the products of our looms are found. (Yes, and our dairies, too). True, the cheese of New-England is found on the table of the old English squire; but this is not the time to dwell on such matters. Have we overcome the prejudice, the common objections raised in regard to our iron and cotton, and woollen, and our dairy products? We have, and can now add to them the culture of silk. If we have no fear in cottons of cheap labor, why should we have any in silk. In Europe and Asia labor is not united with intelligence--in America intelligence is united to labor; and in this lies all the difference. (Cheers.) The indomitable spirit of the Anglo-Saxon character is fully developed under our civil and religious institutions. (Cheers.) We stand on this ground with a climate equal to the best, superior to most, in the culture of silk. Our soil is virgin, our sky is blue, and our people are *Protestant.* (Loud cheers.) Labor is valuable, as before stated, not from what it costs, but from what it produces. Our countrymen are intelligent, thinking, working people, and who are our competitors? Go to European and Asiatic countries for your answer. (Cheers.) A free, Protestant community will ever be an active, improving, elevating community. (Cheers.) England may compete with us in the manufacture of silk, but she can never grow a pound. (Loud cheers.) We! We! are the only free *Protestant* nation on the face of the globe, which can be at the same time a silk growing, and a silk manufacturing people. I refer here to our national Protestanism, *merely* as one of the essential elements of our national enterprise, without going at all into any theological discussions. (Loud cheers.) But I find I have gone beyond my allotted time. (No, no, go on, go on.)

I have one or two observations, and then I have finished. The silk growers have much more to contend with than is generally imagined. It cannot progress so fast as other products. We require the growth of the foliage, and it takes two or three years to bring this to perfection. Silk culture resembles fruit-growing--we must plant the tree and await its budding time. It was a different case from the crops of corn, and grain, and so on. It was a gradual business, and required patience. But all these obstacles had been met, and happily overcome. It was recollected that the first implantation of the silk culture in Italy, France, &c., took longer than it had done here.(Applause.) And so had there been many adventitious difficulties in the way—the over zeal of friends in pressing the enterprise too rapidly, and without reflection and judgment. These things had, however, he was happy to say, been all met and overcome. The friends of this cause now breathed more freely. (Applause.) Public opinion instead of opposing it, was fast setting in its favor. No longer were 'multicaulis speculations' the theme of general ridicule, (a laugh,) and the newspapers no longer amused themselves with cracking their jokes at our Utopian schemes. Now, there were papers devoted to the enterprise;—all agricultural papers in the country treated it with approval, and, indeed, the press generally, it may be said, were either in favor of it, or were fair, and open to the consideration of its merits. (Loud and long applause.)

The speaker (who was listened to with great interest throughout,) then adverted to the fact which American silk growers had fully demonstrated;—that all that was wanted to produce the article in perfection was the simplest kind of shelter for the worms, the *open shed*, or *tent*, and the pure, free, unadulterated air of heaven. Give but these, and the silk culturist asked no more for the successful working of his efforts. (Great cheering.)

Mr. B. then alluded to the great number of letters, corroborating these statements, which the convention had received from all parts of the country; and named them in the following order: "Arkansas, Mississippi, North-Carolina, Maryland, 'The Far West,' Wisconsin, Indiana, Ohio, Tennessee, Kentucky, Massachusetts, Connecticut, Rhode-Island, and Maine. Yes, 'down east,' with all its chilling breezes, can grow silk, said he: I have here the fullest and most satisfactory documentary evidence to prove it. I do not mean to say that Maine can compete with the Middle and Southern States in the culture of the article." He would make no such comparisons, but this he would say, silk could be successfully cultivated, wherever corn could be cultivated!—(Protracted applause.)

Mr. B. then expressed the thanks of the convention to the American Institute, for the vigorous measures they had adopted to promote the interests of the silk business, and expressed the hope that the silk specimens in the horticultural room, would be carefully examined by all. He then adverted (in a strain of quiet humor) to the fact that he wore a velvet vest and cravat, grown and manufactured among the green stumps of Ohio: that he should be happy to tell his audience something about them, only his good mother always taught him never to talk about his own clothes, especially when he happened to have something rather nice—rather above the common run of things. (Laughter and cheers.) But if his audience would come and shake hands with him, he should be very happy to show them his jacket! (Roars of laughter, and cries of go on.) He then bespoke the kind regards of the auditory for the cause of silk culture—an enterprise that was yet, in his opinion, to clothe millions now not born, in this happy land, bequeathed to us by our fathers. (Loud applause.) A word before we part. Here I present to your inspection a manuscript copy of a work on silk, written by the pen of that good man, Dr. Styles, of Yale College. It is a full, detailed account of the culture of silk from 1763 to 1790, during which interval he was zealously engaged in philosophical experiments in feeding the silk-worm. All the great facts which the Doctor here records, are now found to be true; for the same sun shines, and the same winds blow. The volume is prepared with the utmost care, and belongs as a bequest to the library of Yale College. It is exactly in the state in which the worthy Doctor left it, bound with the very string which his own hands had tied, and surrounded with all the veneration with which respect for the honored dead can invest it. Here it is, (holding up an old, thick, marble-covered volume, of letter paper size, bound with a great silk cord—a relique of days gone by. The audience evinced their respect in a general, but suppressed buzz of welome greeting.) My friends, I would pass it round, but it has been left in my charge, with sacred orders to preserve it safe and sound, and I cannot run any risks with a volume so precious; but if any of you desire to see it, come to my rooms, and there you shall have a full and sufficient examination of its contents. (Cheers, amid which the speaker took his seat, the applause continuing for several minutes.)

Second Day—*October* 13*th*.

The convention was called to order this morning at 11 o'clock, when the minutes were read and accepted. Gen. Tallmadge, the president of the convention, in the chair. The unfinished business of yesterday, being the adoption or rejection of the resolutions, was brought forward for action, but before they were all disposed of, the convention adjourned and proceeded to Niblo's, to hear the address of Dr. Smith, of Baltimore, before the American Institute.

The bands of the North Carolina and of Governor's Island were in attendance, and played several national and select pieces alternately through the day. The managers, together with the members of the Silk Convention, tood their seats in the centre of the gallery, and the president announced the speaker, introducing him as Dr. Smith, of Baltimore, a sound, practical working member, who read from his notes the following quaint, lucid and interesting address on silk culture, which was received with repeated bursts of applause on the part on the audience:

Ladies and Gentlemen—I comply most cheerfully with the request of some over partial friends, in offering a few remarks on the very interesting subject that has called us this day together. Entirely unaccustomed to public speaking, I shall need, and feel assured I shall receive, the indulgence of this respectable audience, for the many imperfections I may exhibit. For seventeen years I have watched with intense interest the progress of the cause we are now endeavoring to advance. At the commencement of the term, the silk-worm was kept at a public exhibition at the place of my residence, as an object of curiosity, and excited great interest. I saw the five hundred worms of that exhibition increased, in the progress of years, to probably a hundred millions. I saw them leave the tables of the exhibition room for the shelves and hurdles of the numerous cocooneries of our country; and I rejoiced in the increase and the change, because I saw in them the filaments of the fabric that should one day form the banner of our country's independence. During that long interval of time, I have seen nothing that discouraged the idea that this country might become a silk producing nation; on the contrary, every circumstance that has come under my notice, has tended more and more to the conviction that we are better qualified for this business than any other people on earth. There is no natural qualification that we do not possess in a superior degree to any other people; and who shall say that the Americans are inferior to any others in industry, ingenuity, energy and perseverance? Our soil and climate are admirably adapted to the growth of the mulberry tree, as has been abundantly proved by the late mulberry tree excitement—there not being a single county, that has been settled by inhabitants, where the mulberry tree may not be found growing, and bearing testimony, by its thriftiness and vigor, to the congeniality of our soil and climate to its nature. During the years 1838, '39 and '40, great numbers of trees were imported from France and Italy, and I had frequent opportunities for comparing them with those grown in various parts of our own country. The result was, that upon a fair average, trees raised in this country of one year's growth, were equal in size and productiveness to those of Europe of three years' grówth. And as to the silk-worm, I know there is no other climate in which it is more healthy, or where it thrives more vigorously. It is true we have met with many disasters from the diseases incident to silk-worms; but in what country do these disasters not happen? The public statistics of Europe report that an average of one-half of all the silk-worms that are hatched there, perish from disease. We have no such statistics from China; but I have no doubt they suffer equally there. I hazard little in saying that we do not suffer to this extent. But the ingenuity of our countrymen, aided by the lights obtained from other countries, will soon be able to furnish preventives, and we may encourage ourselves with the prospect of an entire removal of this evil. Already have we made improvements in this branch of the silk culture greater than had been made in Europe in fifty years previously. The system of open air feeding, that has been so well alluded to in this place, will accomplish much in this respect, if not entirely obviate the difficulty. Let us persevere, then, for we have everything to encourage us; and I am almost ready to say, nothing to fear. I have almost said we have nothing to fear; and we have not, except it be a singular feeling among fashionable people, which seems to prefer anything of foreign origin to American productions. Will it be credited that we have a large establishment that manufactures immense quantities of silk and worsted vestings, employing some fifteen or twenty Jacquard looms, and working up large quantities of domestic silk; and yet they dare not let it be known that their goods are manufactured in this country! They even declined allowing me to exhibit specimens here on that account. We must, therefore, try to do away this feeling of foreignism, and to excite a contrary feeling—we must try to make our people feel proud of American goods. And may we not hope to enlist the feelings of our fair sisters in this cause? They did not fail us when the troubles of the times tried men's souls—they will not fail us now. It is estimated that we consume, on an average, twelve millions of dollars worth of silks annually. For this we have to pay in specie, or its equivalent. Is there any adept in figures present, who can tell us what effect the saving of this amount of specie annually will have upon the circulating medium, the exchanges, the wealth and welfare of our country in twenty years? I am one of those who go for our country, our whole country, and nothing but our country, on all such questions as this. I wish to see our own land produce everything that our people consume; and I should be glad to see our country so productive that the wars and commotions of the world would not be able to affect us. I want to see our country in such a situation, that if a wall were built around it, "sky-high, sir," we should not suffer privation of a single necessary or comfort, or even luxury of life. And that would be, truly, independence. It has been said, if we take nothing from other countries, other countries will take nothing from us. In reply to this, I would remark that other countries will, at all events, take nothing from us that they can do without—that they can make or produce themselves. They, at least, always have acted upon this principle; it is natural they should do so, and it is high time that we do the same. It is a good maxim for any people, individually and collectively to buy only that which they cannot themselves produce. The profits of the culture of silk are at least remunerations. He who enters upon this business with the expectation of realising five hundred to fifteen hundred dollars for every acre of ground planted in mulberry trees, and with the supposition that he can occupy as many acres as he pleases in this way, and with this profit, will certainly be disappointed. But he who shall commence it with a moderate portion of common sense, enlightened by proper information, exercising due economy, moderate skill, and an ordinary degree of American perseverance, with the expectation of a good living profit, will be sure to succeed to his entire satisfaction. I am inclined to the belief, that the culture of silk should be made one of the objects of attention of every farmer's family, as is the production of butter and other articles of domestic produce. Let every family rear twenty to fifty thousand silk worms, more or less, as their situation and arrangements justify. Let them reel the cocoons, make what sewing silk, mitts and hosiery they may require, out of the produce, and sell the nicely reeled and prepared overplus raw silk to the merchant or manufacturer. Is not the immense amount of butter consumed in the United States, produced in this way? Are not many other articles, of immense magnitude in the aggregate, all accumulated from the collection together of small parcels produced in this small way? Despise not, therefore, these small things; but remember, that as mountains are composed of ultimate atoms so small as to be almost unappreciable, so is the aggregate of the wealth of a people. What though we have exported to foreign countries forty-seven millions of dollars worth of cotton during the year ending 30th of September, 1842, has not this mass of wealth been collected together from the myriads of small bolls in which it grew, each in itself not worth intrinsically the tithe of the tenth of a cent? And what though the silk-worm, individually, produces but a small filament of itself, and by itself almost worthless, does not the combination of these filaments compose the thread that forms the fabric that costs us annually twelve to twenty millions of hard earned dollars? But I am by no means ready to admit that the silk culture can only be carried on profitably by farmers' families in a small way. When judiciously pursued with such information, skill and economy, as are at all times at command in all American communities, and as are necessary to success in any other business, it will be found a profitable business on a large scale—on any scale. This has been proved satisfactorily by the success, to an eminent degree, of the people of the society at Economy, Pennsylvania, and by Mr. Gill, of Mount Pleasant, Ohio, and numerous others. On the score of profit, therefore, there is no reason for despondency, but everything to encourage us to proceed in the silk culture. I am sorry I cannot say much of the success of the business in the southern States. The people there seem to lack that individual energy and perseverance, and especially that appreciation of small things necessary to the success of such a business. But in the north and east, where industry, energy and ingenuity dwell; and in the west, the great west, the young giant of the world, where enterprise progresses with a whirlwind rush, where every seed that is planted is soon to produce fruit, either from the undiluted richness of its soil, or the indomitable exertions and energy of its people—in both of these sections of our country will the silk business flourish profitably to individuals, and to our country, until the entries in our custom-house books shall be reversed; until instead of the importation of $20,000,000 of silk, we shall see recorded there the exportation of $40,000,000 worth annually. A few practical remarks may be admissible here. Before we can hope for complete success in the silk culture, we must learn more of the minute details; we want more patience in the tedious processes, and above all, as before suggested, we must try to be satisfied with moderate but still remunerative profits. We must not expect to make a thousand dollars, where the same amount of capital and labor invested in any other business would only make a hundred. We must not expect to rear successfully a million of worms in a space calculated only for a tithe of that number. We must not treat the delicate silk-worms as we do our hogs, by throwing a basket of food among them, and then let them take care of themselves. The very nice and delicate operation of unwinding the fibre from the cocoons, must receive more care and attention. We are not spinning cotton, nor wool, nor hemp. The extremely attenuated and lustrous fibre must be gathered upon the aspel with all delicacy and care. The water of the basin must be kept pure, that the lustre of the silk may not be tarnished; the thread must be kept even, by careful attention to the number of cocoons running off I have seen very little raw silk for sale in the market, prepared as it should be, as it must be, to compete successfully with that from Piedmont. But I have seen some (and for such I refer you to specimens in the Hall,) and enough, even in the absence of any other proof of our capacity, to prove our ability to produce as good an article as can be made by any other people under the sun. Let reelers be informed, and always bear in mind, that care and skill will make their pound of silk worth six or seven dollars; whereas carelessness and inattention will make it worth no more than three or four dollars. Will it be believed that two reelers shall each take one bushel of the same parcel of cocoons—being a fair day's work for each—and one shall produce from her portion, a pound of silk worth six dollars, while the other shall produce the same quantity worth only three dollars, the latter being not even the value of the cocoons before she began to reel them. This is an important point in the silk business. It has always formed the stumbling block to our progress heretofore, but I trust it will no longer be permitted to remain so. The curing of cocoons is another subject of deep interest.

In this we are already far ahead of our European competitors. The application of heat, either artificial or natural, in killing the chrysalid, should be avoided. It injures the fibre, and increases the difficulty of reeling. So, also, do the fumes of sulphur, by depositing sulphuric acid upon the fibre, the gum of which does not entirely protect it from its effects. Camphor, in tight boxes, effectually kills the insect, leaving the cocoons in a state for reeling equal to that before curing. But the best of all is the vacuum box—an American suggestion. If this announcement depreciates its value, I cannot help it. Placing the cocoons in an air-tight box, and exhausting the air by means of a simple pump, will kill the insects directly, or in a few hours. By placing a small quantity of camphor in the box, the cocoons may be preserved in it from any bad effects for several weeks.

The only suggestion I have to make in furtherance of the object of this convention is, that facilities be offered, in all parts of our country, for the conversion of small parcels of cocoons into raw silk. In other words, that agencies should be established, for the purchase of cocoons, in all our principal cities, from such persons as cannot or will not reel them. I do not pretend to be able to say how this can be done; I am only able to point it out as the most efficient means for accomplishing the great object we have in view. Three or four filatures might be established; one in New-York, one in Philadelphia, one in Hartford, one in Boston, one more in Baltimore would do no harm, and each of these should have agencies in the surrounding cities, towns, and villages, for the purchase of cocoons. This would at once create a market for the small parcels of cocoons, and the profitable disposition of these small parcels would at once, and of itself, place the raising of silk worms among the ordinary objects of domestic industry. The absence of such a market has, heretofore, had a very disheartening effect upon silk growers. I am unable to suggest any of the details of such a plan, and only give it as my belief, that some such arrangement is necessary to the success of the silk cause. I have thought these practical hints might be acceptable to some here, but I have already occupied the time of the convention longer than I intended. Permit me, in conclusion, to congratulate you on the prospect of the early accomplishment of the great object which we all have at heart, and once more to recall to your attention the magnitude of the interest we are advocating. Suppose, for example, that we had the power to recall all the money that has been paid for silk during the last twenty years, we should then be able to pay the whole indebtedness of our country. Look at it. During the last twenty years, we have imported and consumed two hundred and twenty millions of dollars worth of silk. The whole indebtedness of our country amounts to about the same sum, and the whole has been accumulated within the same time. Suppose we had consumed the same amount of silk, but that of American product, this vast amount would at this time be in our coffers. But it is useless to reflect upon past negligence, except so far as the reflection throws light upon our future course of conduct, and it is for this purpose that it is now referred to. The question then, is, and with it I now conclude, shall we make our own silk? Or shall we continue to drain our country of its precious metals, to supply us with it from abroad? I think I know my countrymen sufficiently to enable me to answer for them, the first branch of the question, we will; the second, we will not.

Mr. Smith closed, carrying off the uttered thanks, and the hearty good will of all present.

AFTERNOON SESSION.

The convention met according to adjournment—President Tallmadge in the chair. The resolutions, as reported by the business committee, and amended by the convention, were unanimously passed, and are given below.

Specimens of silk handkerchiefs, which were pronounced by competent judges to be of a very excellent quality, spun and wove by girls who four months before had never seen a loom, were exhibited by Mr. Murray, of Paterson, New-Jersey. A vote of thanks to Messrs. Allen of the American Agriculturist, and Fleet of the United States Farmer, for copies of their respective journals sent in for distribution among the members.

Mr. Barbour gave notice that the publishers of the Tribune have now in press, and will publish on the first day of November next, a work on silk; containing a general history of its introduction and culture in Europe and the United States; the natural history of the different species of silk-worm; the Mulberry tree; its varieties and peculiarities; a history of the Morus Multicaulis speculation in the United States; progress of the culture of silk, machinery, &c. The principal documents, and much useful information on many of the subjects embraced in the volume, were furnished by Mr. B.

Mr. B. said the work was designed to be, not a Silk Manual, although there is enough in it to guide any beginner in his first essays It is more scientific and adapted to interest the general reader. It abounds with plates representing the silk-worm in all its changes, together with a silk reel and all the machinery employed in the silk manufacture in Europe. It has been got up by the enterprising publishers at a great expense, as constituting the 6th number of their Series of "*Useful Works for the People.*" Any ingenious mechanic can take these plates, and make the reel, or the machinery represented.

The president read a note from Mr. Allen, saying that he would be happy to publish the proceedings of the convention or any communication the friends of the silk business might make on the subject, and, as far as consistent with other great interests, to make his paper the organ of the silk interest.

Mr. Fleet was present and stated that he would most willingly lend his influence to the noble cause. Short addresses were made by Mr. Prince and others, in which they stated that silk, as well as cotton and woollen goods, and cutlery, were labelled "English," "French," and "Italian," in order to make them sell in our city markets.

Mr. Smith said that there was a large silk manufacturing establishment in Baltimore, running from 15 to 20 Jacquard looms, and making the best of silk goods, but selling them all as foreign. They would not even permit him to bring samples of their goods to the Convention to exhibit as American, and he determined to expose them.*

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* Since the Convention closed I have learned that there are tens of thousands of *labels* printed in this city, by one individual, for American Sewing Silk, as *Best Italian Sewing Silk.* Immense quantities are sold under ths deception. J. R. B.

The difficulty is not that our fabrics are not equal to those of Europe, but the idea had gone abroad that nothing of American production could possibly be as good as the imported article.

General Tallmadge said he was sorry to be obliged to say, that this anti-American feeling was encouraged and strengthened by the example of men in high places. Even our Congress (as an American he was ashamed to acknowledge it, but the truth must be told,) even our Congress when they wanted a new carpet to set their republican feet upon, must needs send to England for it—leaving unnoticed and untouched, a better and a cheaper article, grown on the backs of sheep, and manufactured by republican hands.

Mr. Gill, of Mt. Pleasant, Jefferson Co., Ohio, presented for the examination of the Convention, a *model* of his *Ventilating Cradle.* The design of this cradle is to save labor in cleaning the worms, and to give them, at the same time, the benefit of a *local circulation of the air.* In the experience of Mr. G. and several others, this cradle, with the *open shed* or *tent*, curtails expenses *one-half*, and adds greatly to the quantity and the quality of the crop. The convention heard Mr. G's explanations with a great deal of satisfaction, having full confidence in the utility of the system.

Mr. PRATT, of Shelbourne, Mass., laid on the table a very neat card of specimen silk goods, manufactured by his daughters, of the age of ten and thirteen, and knit by an invalid sister. He gave a succinct history of his experience in rearing worms, and preparing the silk for the knitting needle. He expressed the fullest confidence in the success of the silk-worm on this continent.

A resolution was next passed that a subscription list be opened to defray the expense of printing the report. That each delegate and member of the convention be a committee to collect funds in his neighborhood; and that all subscribers be entitled to the full amount of their subscription in copies of the report at cost.

The president here gave an interesting sketch of the rise, progress, and prospects of the American Institute. He urged the subscription committee to proceed boldly. The proprietors of the principal hotels in this city; the merchants and others who derive a benefit from the influx of strangers to the exhibition, he thought would be liberal in aiding the cause. The princely proprietor of Howard's House had offered his name as good for $50, and others would follow this generous example doubtless. For himself, the General offered his cheerful aid to help on the work—he was ready to share equally the expense and the demand on his personal services. Hitherto they had been given freely, and he was not yet drained in his good intentions.

But before he put the motion to adjourn, he tendered to the press of the city, which had so generously aided the cause of the Institute in their exertions for public favor, and in giving place in their columns to the reports of the convention—he particularly tendered the thanks of the convention to the reporters of the Herald and Express, for the correct and faithful reports of their proceedings. The meeting was then declared adjourned.

Dr. Stebbins then called the attention of all present to the subject of the manufacture of paper from the leaves of the multicaulis. He has had several reams already made, which satisfy him that with some improvements an excellent article can be produced. He has a ton of leaves prepared ready for the manufacturer's hands, and hopes before the meeting of the next convention to be able to write them a narrative of his experiments on a sheet of multicaulis letter paper, which will be equal, if not superior to the best hot-pressed linen paper now used. He further adverted to the matter of obtaining silk for coarse goods, from the inside bark of the mulberry—already it had been tried with success, and the only thing wanted was some cunning Yankee invention wherewith to strip the bark from the tree and separate the fibres. His remarks were listened to with much interest, and without doubt, much good will result from the action of the present convention, and many of the simple and unconnected remarks thrown out in the course of the conversations will be matured, and bring forth ripe fruit in due season.

The following are the resolutions adopted by the convention, as giving their views on the several questions before them.

1. *Resolved*, That the full establishment of the silk business, as an integral part of the ordinary industry of this country, is an object claiming the early and high regard of every patriot and philanthropist.

2. *Resolved*, That in the history of past experiments in growing silk in the early settlements of Georgia, South Carolina, and Virginia, in Pennsylvania, Connecticut, and Massachusetts, immediately preceding the revolution, and subsequently, and especially in the larger, more general, and more successful efforts of the past few years, we have ample grounds for augmented confidence in all the great principles on which the business is based.

3. *Resolved*, That in regard to all agricultural products, there is a broad and well defined distinction to be observed between transient and permanent causes of failure or success—that the permanent causes are soil and climate; and that wherever these are known to be favorable to any such product, we should never be discouraged by transient causes operating against success—knowing that these causes operate in like manner in regard to all such products.

4. *Resolved*, That as American silk, in the state in which the worm leaves it, has long been known to be of first rate quality, it is adequate proof that the soil and climate of our country are eminently congenial to its culture, inasmuch as these two things are the permanent causes that control the quality of every agricultural product.

5. *Resolved*, That the silk culture demands for its successful prosecution, essentially the same climate, and the same kind of seasons, and the same kinds of upland soils as are required for Indian corn; and, as this crop is successfully cultivated in all the States and territories of the Union, there is nothing to forbid, but everything to encourage, the co-extensive cultivation of the silk crop.

6. *Resolved*, That inasmuch as in America and China, the mulberry tree is found in the native forest, it is a manifest indication of Divine

Providence, that this country, as well as China, was designed to be a great silk growing country.

7. *Resolved*, That in view of the experiments made in different parts of the country, as reported to this convention from most of the States of the Union, in feeding worms in a natural state of the atmosphere, we are happy to regard the question as *triumphantly* settled—That, in our superior climate, the open shed, or tent, securing to *our* worms ample shade, and Heaven's pure air essentially unobstructed, is, except in very early or very late feeding, not only all that is needed in the way of building, but intrinsically better than enclosed rooms: Therefore,

8. *Resolved*, That 1843 will form a new era in the history of the silk culture in the United States.

9. *Resolved*, That the introduction of the foreign varieties of the mulberry tree, and the facility with which they have become acclimated, and the reasonable rate at which they may now be procured, and propagated, give to the American people every advantage for the vigorous prosecution of the silk culture.

WHEREAS, In the feverish excitements of the years 1838 and '39 many exaggerated statements were put forth by persons solely interested in trees as an article of speculation, in regard to the profits to be expected from growing silk, and in regard to the intrinsic value of the mulberry tree; and whereas, in the prostration that came subsequently over this business, the public mind was thrown into a state of complete revulsion, the great body of our people for a time regarding the whole business as a delusion, and mulberry trees as utterly worthless—fit only for the flames and the floods—therefore,

10. *Resolved*, That we deem it due to ourselves, and to the public, in all candor to say, as we *do* say, that the silk culture is, in our judgment, entirely feasible, and may easily become second to no other business in the country; that when conducted with appropriate practical knowledge and skill, and with appropriate facilities, it is more profitable than other ordinary agricultural pursuits; and that mulberry trees, for the purpose for which they were designed, are intrinsically valuable.

11. *Resolved*, That the convention deeply regret the loss which the country has sustained in the wanton and inconsiderate destruction of mulberry trees consequent upon the revulsion above referred to; and they earnestly recommend to the present owners of trees to preserve and multiply them with all due care, knowing that their value for making silk will, in due time, be appreciated.

12. *Resolved*, That we are much gratified in beholding the many manifestations of a growing public confidence in the essential merits of the silk business; and we are herein decidedly encouraged to go forward in the business ourselves, using, at the same time, all appropriate means to enlighten the public mind, and confirm the public confidence still more fully. For this purpose we will freely communicate to individuals, and to the conductors of the newspaper press, the results of our own experience, and such other information as

may be in our power to give; exercising all due care to keep within the limits of rigid truth.

13. *Resolved*, That we rejoice in the liberal protection designed to be given to the silk business in the new tariff; and in the fact, that this section of the bill excited no opposition from any quarter of the country, we have a pledge that the policy now established will remain undisturbed, and that such amendments as experience has already shown, or shall hereafter show, to be necessary, will be readily secured; and further, inasmuch as our Congress has never imposed discriminating duties except in favor of such products as may be brought forth from our own fields and workshops, this act is only the expressed opinion of the intelligent body that passed it, that our country can as well make its own silks as its cottons and woollens, its hats and its shoes, its ploughs, its nails, and its axes.

Whereas, The present tariff prescribes a duty of fifty cents on the pound of raw silk, or silk in the gum, and a higher duty on sewings, and other manufactured silks; and whereas we are fully informed that sewings and other silks can be and are imported nearly ready for the market, and yet retaining the gum, coming in under this low duty; Therefore,

14. *Resolved*, That we consider this a manifest, and a gross invasion of the law designed to aid the American manufacturer

15. *Resolved*, That Gen. James Tallmadge, J. R. Barbour, John W. Gill, Gideon B. Smith, Horace Pitkin and J. Danforth, be a committee to claim of the Secretary of the Treasury the prompt correction of this abuse; and, in case it should become necessary, that they lay the subject before Congress at the early part of its approaching session.

Whereas, From the returns made to the convention, it appears there has been a large increase in the quantity of cocoons raised in the country the present season, especially at the west and the southwest, so large as to give just grounds to fear that many will be lost for the want of being timely and suitably reeled; Therefore,

16. *Resolved*, That the early and earnest attention of the friends of the silk cause be directed to family reeling, and to the establishment of filatures for purchasing and reeling cocoons, in different localities where they are now urgently needed; and that the Legislatures of the several States be requested to grant liberal bounties to encourage this important and essential part of the general business—reeling silk in a manner suitable for all the varieties of silk goods.

17. *Resolved*, That this convention are exceedingly gratified in witnessing, as they do on this occasion, such a rich variety of cocoons, raw silks, sewings, twists, braids, gimps, cords, ribands, handkerchiefs, cravats, hosiery, laces, flowered tissues and brocades, in great variety for vestings, plain and flowered lustrings, and many other kinds of dress silks, velvets, satins, serges, armozines, and other silk goods, grown upon our own soils, and under our own brilliant skies, and manufactured by the skill of our own citizens.

18. *Resolved*, That our manufacturers, and other business men, have now every reasonable encouragement to invest, in a wise and

careful manner, their funds in this new form of *domestic labor:* growing and manufacturing silk.

19. *Resolved*, That this convention learns with deep regret that, as in other kinds of American manufacture, it has hitherto been deemed necessary to attach the foreign labels, English, French and Italian, to the excellent sewings and fabrics of our own silk manufactures, in order to command a ready sale in our city markets, superior as these sewings and fabrics are known to be in strength, texture and durability to the foreign articles; and that we earnestly recommend to our silk manufacturers, now in the infancy of our enterprise, to set a good example to their brethren in other manufactures, by attaching their own name to their own goods.

20. *Resolved*, That we recommend to our fellow-citizens to cherish, by their patronage, our infant silk establishments. In this we appeal to those patriotic feelings which ever glow in the hearts of Americans, asking of them all a mutual pledge, each to sustain the efforts of the other, in the progressive development of our mighty resources, and the attainment of a perfect National Independence.

21. *Resolved*, That the thanks of this convention be presented to the American Institute, for the appropriate and vigorous measures they are now taking to promote the interests of the silk business; for the ample accommodations they have provided for the sessions of this convention; and that they be respectfully requested to call another convention similar to the present during the next Annual Fair of the Institute.

22. *Resolved*, That those who are now engaged in the silk business, and others who may engage in it the coming season, be requested to keep as full a record of all their operations as may be convenient; that they be requested also to hold county, or other local conventions throughout the country, some time in the month of September next, and collect these records as extensively as may be, and forward them to the Secretary of the Institute, in season for the next convention.

23. *Resolved*, That the Institute be also requested to take measures to procure, as soon as may be, a new Silk Manual adapted to the present state of the silk culture.

24. *Resolved*, That the doings of this convention, together with the numerous letters received from different parts of the country, be submitted to the American Institute for publication in the form of a *report;* and that J. R. Barbour, of Oxford, Mass., be a committee to aid the Secretary of the Institute in arranging the documents for this purpose.

Whereas, The facts to be embodied in the report, as above contemplated, are of a highly interesting and decisive character, and worthy of an extended distribution: Therefore,

25. *Resolved*, That every member of this convention regard himself as a committee to obtain subscriptions for the same as extensively as may be, it being understood that each subscriber will receive reports at cost, to the amount of his subscription.

26. *Resolved*, That the thanks of this convention be presented to

the conductors of the public press of this city, and to the reporters at our tables, who have so promptly and so fully spread the proceedings of this convention before their readers, and the country.

(*Signed*,)

JAMES TALLMADGE, *President*.
JAMES HARRISON, } *Secretaries*.
JACOB C. PARSONS. }

OFFICIAL CORRESPONDENCE.

State Department, Annapolis, Md.,
September 22, 1843.

Dear Sir :—The circular communication of the "American Institute," of the 15th ultimo, which you addressed to his Excellency, the Governor of Maryland, owing to his temporary absence from the seat of government, did not reach him until to-day. This will account for the delay in answering it.

The Governor requests me to inform you, that no bounty is given on silk, and also, that there are no legislative enactments respecting it, which secure to the treasury any return from its cultivation.

I am, sir,
With high respect, yours,
Jno. C. Le Grand.

T. B. Wakeman, Esq.,
Cor. Sec. of American Institute, New-York.

Newark, N. J., Aug. 21, 1843.

Dear Sir:—The court of chancery in this state, sits on the very day fixed for the Fair of the American Institute, which must deprive me of the pleasure of being with you.

There was a bonus for one year, I think 1838, on silk. The amount paid that year was nominal, not exceeding twenty dollars. I remember it well, for it was made a party question of and repealed. With my thanks for your polite invitation, I remain,

Very respectfully,
Your ob't. serv't.
Wm. Pennington.

T. B. Wakeman, Esq.

Treasurer's Office, Indianapolis.
September 9, 1843.

Sir:—In reply to the questions contained in your circular, of date 15th August, I state:

1. That our State gives no bounty out of the State treasury, but by an act of last winter has authorized the board of county commissioners of the respective counties, to give a bounty of 15 cents per pound for cocoons, and of 25 cents per pound for reeled silk.

2. The law above referred to is the only one that has been passed on the subject, and has no limitation as to time of its continuance.

I am not aware that any county has made provision for giving bounties as above contemplated.

In this neighborhood, and in several other parts of this State, silk has been produced for several years past. Wayne county, I understand, produces the most. At this place from forty to fifty bushels of cocoons have been obtained the present season. In this town and neighborhood there are about fifty acres in morus multicaulis trees, from two to three years old.

More attention would be given to the business was there some practical and experienced person at hand, from whom information as to feeding and reeling could be obtained.

A ready market for cocoons is much wanted. The multicaulis seems to stand our winters very well. Others who have had some experience on this subject, will correspond with you, and give such farther information as may be in their power.

Yours, &c.,
G. H. DUNN, *Treasurer of State.*

T. B. Wakeman, Esq.

MADISON, WISKONSAN,
September 15, 1843.

Sir:—I am favored with the circular letter of the American Institute, dated the 15th of August, and can only inform you in reply, that no encouragement is given by the laws of this Territory, to the production of silk: About six thousand dollars worth of silk has been produced by one gentleman, who took his cocoons to Boston. I have several mulberry trees growing in my garden at this place, which thrive, and were not affected by the frosts of last winter. It is the opinion of many persons with whom I have conversed, and who appear to be well informed in regard to it, that the culture of silk may be prosecuted to great advantage in the country south of the Neenah and Wiskonsan rivers.

With much respect,
I am your obedient servant,
J. D. DOTY.

Mr. T. B. Wakeman, *Cor. Sec.*

TREASURER'S OFFICE, MONTPELIER, VT.,
August 30, 1843.

DEAR SIR:—I have the honor to acknowledge the receipt of your circular of the 15th inst., addressed to his Excellency the Governor of Vermont, and make the following reply to the interrogatories therein contained, viz:—

1st. Our Legislature at their session, October, 1835, granted a premium of 10 cts. per pound on cocoons. At their session, October, 1838, they increased the premium to 20 cts. for cocoons, 20 cts. for reeled silk, 20 cts. for all wove silk. This law still remains in force. The amount of premiums paid for the year 1835-6, I cannot now state, the books of this department of that year being in the hands of the Auditor, at Woodstock; the amount, however, must have been small.

There has been paid for	1837-38	$36 52
" "	1838-39	78 65
" "	1839-40	360 71
" "	1840-41	1,830 39
" "	1841-42	1,891 17
" "	1842-43	1,756 69*

Your obedient servant,
JOHN SPALDING, *Treasurer.*

TREASURY OFFICE, BOSTON, MASS.,
August 26, 1843.

The following is given as the result of an examination of documents in reply to certain questions proposed by the Corresponding Secretary of the American Institute, in a letter addressed to his Excellency, the Governor, viz:

1st. "Does your State give a bounty on silk?"

2d. "Is the bounty on cocoons, or on reeled silk, and how much on each?"

3d. "In what year did the bounty law go into effect, and when does it expire?"

A law passed April 7, 1835, to continue in force for two years, gives a bounty to any person who shall reel, or cause to be reeled or thrown in the Commonwealth, from cocoons produced from silkworms raised therein, merchantable silk capable of being manufactured into the various silk fabrics, fifty cents for every pound of silk so reeled or thrown.

A law passed April 11, 1836, to continue in force seven years, gives a bounty of one dollar for every ten pounds of cocoons, and a bounty of one dollar for every pound of silk reeled and thrown, and fifty cents for every pound reeled, without being thrown.

A law passed March 31, 1839, gives a bounty of one dollar and fifty cents for every ten pounds of cocoons, and repeals the laws giving a bounty of fifty cents per pound for throwing silk.

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* The current year closes 30th Sept., which will probably increase the amount.

Amount paid in cash each year, viz :

1836,	$71 37
1837,	198 00
1838,	350 52
1839,	434 62
1840,	1,233 59
1841,	2,111 42
1842,	3,374 11
1843,	1,852 70*

SECRETARY'S OFFICE, BOSTON,
August 29, 1843.

SIR :—By direction of his Excellency, Gov. Morton, I forward to you the foregoing memorandum, in reply to your circular of Aug. 15,

And am very respectfully, yours,

JOHN A. BOLLES, *Secretary of State.*

T. B. Wakeman, Esq.,
Cor. Sec. American Institute, New-York.

LETTERS RECEIVED BY THE CONVENTION FROM SILK-GROWERS AND MANUFACTURERS.

In presenting these letters, the publishing committee offer a few remarks.

1. The letters, we are happy to say, are so numerous and full, that it has been found necessary to throw out dates, introductions, apologies, conclusions, &c., only preserving the substance of each letter ; allowing, however, each correspondent to tell his own story, in his own way, and, as far as possible, in his own words. But those received from State Treasurers in regard to bounty laws on silk are given entire ; and our only regret is, that we could not hear from all the States on the subject, in the same official way.

2. In the arrangement, we give the official letters first, then those relating to silk-growing, and throw those received from manufacturers together at the close.

3. A part of these letters were addressed to the managers of the American Institute, a part to the New-England convention, and a very few to individuals. But they are all thrown into a common lot.

4. The reader will perceive quite opposite sentiments expressed in these letters, in regard to some points. It would be just so, if 150 or 200 farmers should undertake to give similar statements respecting their

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* As a resident of Massachusetts, I would say, that the last named sum, $1,852.70, must have been paid upon the crop of 1842. The Treasurer's books show the amount paid each calendar year, from January to January. The law expired by its own limitation in March, 1843, and this sum was paid between January 1st and that time, and of course on the crop of 1842. But for the same reasons, a part of the sum given for 1842, belongs to 1841, and so on. J. R. B.

corn crops. Considering how new the silk business is, and how experimental all our operations hitherto have been, it is to me a matter of wonder and delight to see such a measure of perfect agreement on all essential points. It shows the close attention, and the careful discrimination that have been employed in the business.

5. The letters were too numerous to be read, in the brief time the convention were in session, and quite a number have been received since its adjournment. Some of these letters contained specimens of manufactured silks, vestings, ladies' dresses, &c., designed for the exhibitions of the Fair: and as they did not reach the city in time for this purpose, they have all fallen, I am happy to say, into my hands. I have carefully put them all into a book, suitable for the pocket, provided for the purpose, with the manufacturer's name attached to each specimen. Hundreds of eyes will see and admire them.

6. The questions propounded by the trustees of the Institute are given in full in the circular on the first pages of this report. Some of the letters will be unintelligible without referring to these questions.

7. Every silk-grower will be greatly interested and benefited by carefully reading and *studying* these letters. He will get many new ideas. The beginner should read them in like manner, and then *select one of the best cases and follow it out carefully and fully.* I recommend this as the safest course in all such cases. Too many teachers will spoil any experiment.

8. From these letters one thing is very manifest, and that is, that the silk business is extending throughout all our States—that it is assuming—has already assumed the character of a regular business in this country. All the elementary questions upon which it is based appear to be settled, and there now remains nothing to forbid its wide extension as rapidly as correct information respecting it can be diffused.

9. *Another* thought will strike the casual reader of these letters. It is that almost every body has invented a reel, or a twister, or something else connected with the silk business. Some, of course, must be disappointed, for all cannot be best. But the case shows that there has been, in connection with this business, a vast amount of thought and invention, brought into activity—the same as in all other departments of American labor. J. R. B.

LETTERS.

TIMOTHY WHEELRIGHT, *Wells*, *Me.*—Have fifteen hundred white mulberry trees set in a hedge, one, two, three, and four years old; cultivate the land on each side with roots. I have also one acre set last year, 4 by 8 feet, and one and a half acres set last spring, 8 by 16 feet, intending to fill the ground up hereafter. In the mean time I put in other crops. Last spring I got a few Cantons. They flourish finely, better than the Italian. If they stand the winter I shall multiply them by all means. Wishing to learn how to manage the worm, I began to feed as soon as I set my trees, and have fed five seasons with this result: first year, 1 lb. cocoons; second year 6 lbs.; 3d year, 27 lbs.; fourth year, 34 lbs.; cocoons of the first crop 240 to the lb.; second, 312 to the lb.; this year, not yet through. Iestimate the expense at ten cents a pound. Trees not injured by the winter after the first year. The building I use for a cocoonery is about 18 by 24 feet, posts 8 feet, and as open as our common barns, the floor very open, no floor over head, but well shingled, with the windows at the sides and ends that were always kept partly open. I conclude it to be about as open a shelter as the tent of Mr. Gill, of Ohio. I make no use of artificial heat or lime in any age of the worms, but rely on cleanliness; never feed with wet leaves, and my worms are always healthy. My shelves for feeding are of the most simple construction, rough boards placed on hanging ladders, secured from ants, and covered with newspapers. I have just gathered one crop of cocoons, and find them to be very nice. I saved some for seed which I counted; they were 260 to the pound. I reeled one singly to ascertain the length of thread one worm spins. I reeled off 680 yards before the thread broke. I should judge there was 150 yards left. The crop of worms I have gathered were hatched the 28th of June, and it was 36 days before they began to rise to spin, which I attributed to the coldness of the season. Perhaps artificial heat for the coldest of the weather would have quickened them five or six days, but there could have been no more gain, except there was more silk from the same quantity of leaves. I have two other crops (Aug. 20,) yet to spin, which appear to be very healthy. To conclude, it is my opinion that a tent which will keep the worms dry, in our climate, is a sufficient shelter for the worms; and if our cheap factory cottons will answer for such tents, the saving, in comparison to building, will be very great indeed.

MR. SMITH, *Guernsey Co., Ohio.*—Has made the past season 70 bushels good cocoons. He decidedly prefers Mr. Gill's system of shed or tent, and cradle feeding.

JOHN ZANE, *Martinville, Ohio*, has fed this season 57 bushels of cocoons, all pea nuts; thinks very highly of Mr. Gill's shed and cradle,—is confident that this system reduces expenses one-half, and increases the quantity and the quality of the crop.

JOHN MCSUMMY, *Manheim, Lancaster Co., Penn.*, says:—Your convention was unknown to me until this day, too late for me to attend. I am sorry, as I have over 100 lbs. of well reeled silk (from 10 to 20 fibres) of this year's crop, which I should like to take on to New-York to sell, besides attend the convention. I have more yet to reel.

There is much silk raised in this county. We have suffered for want of good reelers. I have now surmounted this difficulty, as well as other difficulties in raising silk, and experience both pleasure and profit in the business. I should be very glad to receive orders from manufacturers for my silk now reeled, or I will reel to order.

I began in the silk business in 1839, and have increased as follows:

1839	made	40 lbs.	cocoons,
1840	"	165 "	"
1841	"	534 "	"
1842	"	856 "	"
1843	" nearly......	1,800 "	"

I have used different kinds of leaves, but never found any difference where the trees were cultivated alike. They must be cultivated and kept clean, otherwise it is useless to try to make silk. It is also useless to try to feed after harvest where the old leaves have not been taken off the early part of the season.

I have fed for two seasons out of doors, in *open shantees*, after the worms had passed the third moulting, and fed altogether on branches. It is a very great saving of expense and labor.

JAMES HAMILTON, 2*d*, *Bridport*, *Addison Co.*, *Vt.*—Sir :—It is four years since I commenced feeding worms. The first year had but few, fed them in a tight chamber before an open window, did well. The next year fed many more in the same chamber, but not with as good success. Those that stood back where the air did not circulate so freely, became diseased. We placed them in the centre of the room a week before winding, yet it did not prevent the disease. The third and fourth seasons I fed in my corn-house, with a door open at each end, which gave a free circulation of air, closing them only in cool weather, or in case of high winds.

At one time, in a very heavy shower, with high wind, the doors and windows were open, and the shelf of pea nuts near the windows was completely drenched in the torrent, and I thought lost. As the water drained off, however, they revived ; fresh leaves were given them, and they came forth with renewed vigor. We have not had any trouble with diseased worms since we commenced feeding in the corn-house.

As to the variety of worms, I should prefer the pea nuts and sulphur for beauty and texture, but the orange for weight. I feed on the white mulberry and the multicaulis. I feed on swing shelves to prevent the ants destroying the worms. Clean them by moving them on fresh leaves, so as not to disturb them when moulting. I have generally fed two crops and of the same kind. The last are from one to nine days longer in coming to maturity than in the fore part of the season. It is more difficult reeling the cocoons.

Dr. Joel Rice, *Bridport*, *Addison Co.*, *Vt.*,—Sir : In the spring of 1839 several individuals of us in this town were induced to engage moderately in the mulberry speculation, and as in most other cases, our expectations of profit from the sale of trees were cut off; but we did not therefore come to the conclusion that the trees were worthless, but have continued to propagate them to some extent, with the expectation that silk would ere long become an important staple of our country, with an adequate protection by our government.

We have fed worms for four years, mostly on a small scale,—two individuals have made about 50 lbs. cocoons the past season,—have generally fed in rooms too confined,—two or three persons have used buildings for feeding that were well ventilated, and have succeeded better ; worms more healthy and cocoons larger. We use mostly the multicaulis : those that we design to plant the next season we take up in the fall, put them in sand in the cellar, or bury them in the field ; those that we wish to make permanent trees, we let stand. I have multicaulis trees which have stood three winters, have greatly increased in their foliage every season, and appear to endure the frosts as well as the Alpine or Italian.

We have fed early and late, and have succeeded much better with the former.

We have had no experience in the manufacture of silk, except sewing silk. In this we have succeeded tolerably well. We have as yet had no apparatus but that in common domestic use.

The names of those who are cultivating the mulberry in this town are—Rev. Dana Lamb, Messrs. Kuther Ferre, Royal Gay, Asa Rice, Henry Jones, Jonas Rice, Josiah Barrows, James Hamilton, 2d, Gordon Searl and George Gale, and we hope soon to enlist many others in an enterprise which we consider feasible, and one that will result in a profitable and permanent branch of American industry.

A. C. Van Epps, *Auburn*, *N. Y.*.—In answer to the first inquiry proposed, viz : "How long have you fed?" &c., I answer—as a business, I have engaged in it only one year. My health failing so that I could not pursue my profession, (teaching) I engaged a cocoonery in 1842. A gentleman here had a quantity of eggs, saved by himself in 1841, from eggs sent him by his son, Rev. Mr. Pease, missionary to Cyprus, consisting of the following varieties, viz : Broosa, Lapithas and Paphos—considered among the best ever introduced into this country. I knew them to be from healthy stock and supposed my prospect good. I called on him early in June—and found them in a close box in his cellar, and on opening found all hatched or nearly so. In my ignorance I considered this a favorable commencement. I took over 30 ounces, and proceeded at once to the business of feeding. The result any novice can guess. Disease raged from the beginning; I spent much of my time in procuring and studying a silk library, to ascertain the disease and administer remedies. Enough, however, lived to near the fourth moulting, to require 3 or 4 men to cut and supply them with branches. In the end, however, we could hardly say bushels. Not satisfied with this, Mr. Morris of Burlington, sent me a few ounces of eggs in no better condition (as they proved) than the first. (They were not saved by himself as I supposed.) And the result was as at first. I visited a silk grower in the country, and got from him a few choice cocoons, from which I saved, perhaps, one sixth of an ounce of eggs. These I fed during the present season with perfect success, and have saved over two lbs. of eggs. No appearance of sickness was visible this season. The worms grew very large, and the cocoons exceeded in beauty and quality, any I have ever seen. The first year was attended with several hundred dollars expense, and this with none. The first season I fed in a large two-story cocoonery—containing about 60 large windows (cost $1,600), which afforded almost the sole means of ventilation, and rendered the room so light, as to make it impossible to feed near the outside of the frames. These were filled, at first, with lath about one inch apart, for spinning in, and covered. The feeding was done on the top of the shelf—I took off the cover and removed 3 out of 4 of the lath. This formed the frame on which I fed after the 4th moulting. But of this year I say nothing more, as I look upon it only as a school, and a most perfect piece of folly—for had I taken 5 oz., at first, of the same eggs, and fed in the open air, (where I now think feeding should always be done, except perhaps a tent, to protect from sun and rain), I should have done much better with one-twelfth part the expense and a better result. This year I fed in a small barn—sawed off the boards part of the way round, and with the doors open most of the time. The worms were as well supplied with air, as they would have been on the tree. I fed on frames, somewhat resembling those of J. B. Tillinghast—only more open. I placed a quantity of eggs on the trees, which hatched and grew finely until the third moulting, when a cloud of birds were seen for some days hovering about the orchard, and destroyed all. I had the pleasure, however, of feeding a little while with nature—and between the 2d and 3d moultings, I actually gained on her, as mine went through in three and a half, and those on the trees in five days.

I have never had any other personal experience—have fed the Mammoth White Pea-nut this season, and having such good success, of course, I prefer this variety. During both years' feeding, I have used for the most past, the multicaulis—occasionally feeding with the white—as the branches form such a good place for spinning. I shall use multicaulis in my future feeding—shall plant them in the best soil, about 5 feet apart—and cultivate them with as much care as a crop of corn. I should commence feeding in April, if leaves could be procured so early—for I should be very unwilling to retard the hatching process of the egg. A friend of mine has been feeding a few worms for three or four years past with entire failures—or results similar to my first year. This season, he extended an awning in front of a shed in which he fed, and placed in it one of Mr. Gill's cradles, but he was so afraid the "poor creatures" would be "too much exposed," he boarded the sides up to the awning, and thus completely destroyed the experiment. Personal experience, in this business, teaches a dear lesson—but it seems that some of us will profit by no other. I don't think he had any more cocoons out of 5 oz. of eggs, than I had from one-sixth—not many more certainly. I have neither made, nor witnessed any experiments in converting the mulberry leaf into paper. I have now on hand about 8 or 9 acres of multicaulis from 3 to 5 years old, very heavy—sufficient to plant out 20 acres next spring. The original, or *panic cost* of these was not less than $14,000. But I must refer, before closing, to the only point on which I feel at a loss to speak, and that is the preservation of the eggs. I deem this the most important of all—and at the same time least understood. I trust the experience called into the convention, will present to the country something on this point which may be relied upon.

Hon. Wm. Woodbridge, *Detroit, Michigan.*—I am honored by the printed communication you were pleased to transmit to me, on the part of the managers of the American Institute, relative especially to the culture and manufacture of silk. I am sorry that it is not in my power, individually, to add any thing to the general fund of information, which, so greatly to the benefit of the country, the Institute is collecting relatively to this subject. I do not hesitate, however, in expressing the opinion, imperfect as may be the data upon which that opinion rests—that complete success will ultimately crown the efforts of those who are now so patriotically seeking to introduce among us, the culture and manufacture of silk. The almost infinite variety of soil, climate and aspect, which the broad surface of our immense and fertile country exhibits, cannot, I think, leave a doubt upon the minds of our intelligent citizens, but that, with a steady and reasonable protection on the part of government, these efforts must succeed—and to the immeasurable benefit, ultimately, of the nation. The peninsula of Michigan is hardly yet sufficiently reclaimed from its wilderness state, to have furnished any experiments of a conclusive character—and yet I have understood that some individuals among our farming citizens have turned their attention and efforts to this object, with very flattering results so far. And with a view to encourage and fix still more the attention of our agriculturists here to the subject, I this day send your printed communication, together with the beautiful specimen of sewing silk which was contained in it, to the "Washtenaw Agricultural Society," of which the place of meeting is at "Ann Arbor," some forty miles in the interior:—near which place one of our enterprising fellow-citizens has already produced some beautiful specimens of silk, which he has himself grown.

[With great pleasure we give room for the following neat little case from a young girl, 13 to 14 years old. J. R. B.]

Miss Angela A. Bryant, *Mansfield, Mass.*—My father, who had the pleasure of conversing with you on board the Cleopatra, informs me that you wish to collect as full an account of the silk culture as possible, including the smallest essays, and mine is such.

Summer before last I had given to me 40 young silk-worms. From the eggs procured in this way, I had last summer between 5 and 600 worms, which I fed mostly on the white mulberry; I lost but few by disease. They were fed five times a day, and the litter was removed every other day by taking them in the hand and placing them on fresh leaves. At 30 days of age they began to spin. There was much irregularity in the time of winding. From my 600 worms I raised 5 pints of cocoons which I sent to Mr. Hewing, of Foxborough, Mass. The product was 18 skeins of sewing silk. Of the expense I can say nothing, but I derived a great deal of pleasure from the care of my beautiful spinners.

DR. JOEL BARBER, *Orwell, Rutland county, Vt.*—I have fed a few worms each year for the last five years. I have kept my worms in my chamber, without any attention to temperature, except closing the windows in damp and cold weather. My worms have been invariably healthy. I think the bounty in this State will pay the expense of feeding. We have manufactured our cocoons into sewing silk and twist, with a common reel and wheel. The silk, for beauty and strength, is equal to Italian.

Last spring I laid down several thousand trees, with a view of doing business on a larger scale. The Alpine, Broosa and Italian varieties flourish in this State. The multicaulis cannot be got forward in season to get a crop so early. I put out my eggs to hatch as soon as the trees begin to leaf out. The business is increasing in this vicinity. Israel Smith, Esq., of this town, has seven acres covered with beautiful trees. He has commenced feeding this season with good success. Others have raised from 5 to 100 lbs. cocoons—confidence in the success of the business is increasing from year to year.

CLINTON S. FAY (late of the N. Y. Deaf and Dumb Institute,) *Salem Cross Roads, Chat. Co., N. Y.*—I thank you for the Annual Report of the New-England Silk Convention, that you sent me last spring. I have been engaged for eight years in the business of growing silk. I commence feeding forms in the early part of the season. I have used no artificial heat; kept them in an out-house, where they had plenty of fresh air, and they were healthy. I fed a few thousand worms on the morus multicaulis, and some on the white mulberry, at the same time taking care that the leaves should not be mixed together. Those fed on the white mulberry were large and healthy, measuring most of them 3½ inches in length, when full grown, and make good cocoons; while those fed on the morus multicaulis were of an inferior size, making lighter cocoons than those fed on the white mulberry, weighed 2½ pounds, while the same number made by those fed on the morus multicaulis only two pounds. I think that the white mulberry is the best; there is more substance in the leaves than in the morus multicaulis. [Our friend does not tell us whether the morus multicaulis leaves, in the above experiment, were equally ripe.—J. R. B.]

F. LEONARD, *Watertown, N. Y.*—Sir: I hatched a crop of peanut silk-worms the 1st of July, which were kept till after their second moulting in an airy room, and then put into a barn which had been removed from its old location. In this barn they had a free circulation of air, either with or without the doors being shut. The worms did well till after fourth moulting, when some turned yellow and died—loss at least 20 per cent. A lot of worms fed by a lady (Mrs. Fairbanks, of Le Ray,) near me, from the same eggs, are the finest I ever saw, yet she too sustained a small loss from the same disease; she states that a few worms looking so bad that she considered them lost, she threw them into the garden and there fed them—and a great portion of them recovered and made cocoons in the grass.

DAVID W. DEXTER, *Claremont, N. H.*—I regret much that I am not able to meet my friends, the silk growers of the country, in convention, but unforeseen circumstances have rendered my absence unavoidable. I confidently believe that these two conventions, at Northampton and New-York, will spread before the public so much practical experience, and such profitable results, that the last lingering doubts of the most prejudiced and disappointed multicaulis speculator must be removed, and that they and all others who have looked upon the persevering silk grower with contempt, will be compelled to admit that we have not been chasing shadows—that the culture and manufacture of silk is altogether feasible, and will be a source of wealth to this nation. In regard to the results of my own experience, am unable to give any statistical statements.

From five years' experience, I have come to the full conclusion that open or tent feeding is the only way that we can raise silk successfully. My cocoonery is 106 feet by 25, with 20 windows, 3 ventilators in the roof, and a number in the floor. This season I have taken out the windows and left open the ventilators day and night, and with admirable success. It is the pure air of heaven that is needed, and the more the better—and I think, sir, that we had better turn our whole attention to the raising of one crop, which in our latitude should be secured up by the 1st of September.

SAML. C. MOORE, *Georgetown, Mass.*—I send you a sample of the silk I raised this year, reeled on a common silk-reel, and spun on a common spinning wheel. I received for my silk and cocoons, at the Essex County Cattle Show at Andover, $8 as a gratuity—by mistake printed as for Amos P. Dodge. The quantity I shall have, cannot yet tell, as it is not all reeled. My worms did very well.

I think the friends of the cause have great reason to congratulate themselves on the present aspects of the silk business. New-England can grow silk. We can easily become, in a few years, exporters of this rich and beautiful article. I am glad our people are beginning to see that it is bad policy to send our money abroad for an article which we can just as well grow and manufacture ourselves. Another thing, the Western Railroad now opens all the great markets of New-England to the agricultural products of the rich and boundless west, so that all our products are now low, and likely to remain so. New England farmers, therefore, must take up something new—something with which the market cannot be glutted. That silk is that thing, there is not, in my mind, a question.

Hon. Levi Woodbury, *Portsmouth, N. H.*—I am not a silk grower, and therefore, am not able to answer the inquiries put by you; neither do I manufacture any, but I have taken some interest in both, and have some mulberry trees grown, with a view, when leisure may permit, to attempt rearing the silk worm on a small scale, requiring no great outlay of capital; and employing the aged, infirm, and youth chiefly in the work. I have for some years believed the business would prove profitable.

My thanks for the specimen of sewing silk sent me, and your polite invitation to attend the anniversary of the Institute, which previous engagements must prevent.

D. B. Blakesley, *Newark, Wayne Co., N. Y.*—I am a silk grower, and feel a deep interest in the enterprise. I send you a brief statement of my experience in the business. Answer to question 1st. I have fed silk worms three years, the first year I failed for want of sufficient ventilation: from two ounces eggs well hatched (peanut variety) 4½ bushels cocoons. Second year, summer of 1842, my success was triumphant; from four ounces eggs (common sulphur) the product was 33 bushels superior cocoons. The third year, viz: the past summer, I have failed almost entirely—from six ounces eggs (both peanut and sulphur,) the product was 15¾ bushels very poor cocoons. Answer to question 2d. My cocoonery is in an upper room in a building 163 feet long and 40 feet wide; the lower part is used for horses to stand under during church service on Sunday. Last spring, a *hen-house*, (which I could not prevent,) was built in one end of the lower part of the building, and directly under my cocoonery; the hen-house is 30 by 40 feet; hens to the amount of two or three hundred have been kept there all summer, and I have consequently not had a breath of pure air in my cocoonery during the season; the stench arising from the hen roost, at particular times, was almost suffocating. My worms were managed this year precisely the same as last, by the same persons, and fed from the same trees. Several of my neighbors have engaged in feeding worms this year, and all have been very successful, and had their eggs of me. I am unable to account for my failure in any other way than by the infected air from the hen-house. My last parcel of worms, at the age of two weeks, which were very unhealthy, and dying rapidly; I gave them to a neighbor, who removed them into his own laboratory, and in 48 hours they had stopped dying, revived, and have done well ever since, and are now winding. I have common stoves, but have not resorted to artificial heat but very little at any time; whenever I have, I have endeavored to keep the temperature up to 75 degrees Fahrenheit. Answer to 3d question. I have never fed in open sheds or tent. Answer to 4th question. I prefer the orange peanut to any I am acquainted with. Answer to 5th question. I use the morus multicaulis, and no other; I care not how they are planted, whether in cuttings or whole trees; cut off the tops close to the ground in the fall, if they are to be preserved for planting, if not I do it early in the spring. The same quantity of ground will produce more foliage managed in that way than to let the trees stand. Answer to 6th question. I have had as good success in late feeding as early, my experience has taught me no difference. Answer to the 7th question. The failures in feeding that have come under my observation, in a proportion of 99 to 100, have been for want of sufficient ventilation. I have used the mulberry leaf for no other purpose than feeding worms and milch cows, and neither have I tried any experiments to get the bark off the tree. From all my experience and observation, I think we have abundant encouragement in this most noble of all American enterprises.

TITUS BROWN, *Francestown, N. H.*—I want your report. I cannot truly call myself a silk grower, except it be in anticipation. It is my intention, at a future, and not a distant day, to engage in the business. I am, for that purpose, cultivating a considerable quantity of the multicaulis mulberry, and shall next year increase the number of my trees as much as possible. Some of my neighbors laugh at me, but I am not discouraged. I believe the business, when fairly established, will afford as rich a return for the capital and labor employed, as any of the ordinary branches of business, in which men engage. With such a result, those who go into it should be satisfied

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ROBT. SINCLAIR, *Clairmont Nursery, near Baltimore.*—I have not been engaged in manufacturing silk, but having a large stock of morus multicaulis and other mulberry trees, I built a house 42 by 30 feet, two stories high, both stories and garret well shelved, with a suitable cellar to preserve and cut the leaves in. In 1841, I had 83 bushels of cocoons raised in it—sulphur and peanut, mostly the former. In 1842, I let the house and trees to a person on shares, who made about 16 pounds of reeled silk, and upwards of 100 ounces of peanut eggs. The present season, I managed it mostly myself, but owing to many other engagements, I made only one crop, amounting to 34 bushels of peanut cocoons, which was as many as the house would hold at one time. To regulate the temperature, I have a small tight room in the cellar, with a stove in it, which enables the manager to warm the house, by means of suitable conductors to convey the heated air into the different parts; but I found, in our climate, this trouble and expense may be avoided, by commencing about the first of the 6th month, after the chilly, damp weather is past. My glass windows are in one frame, and hinged so as to open or shut as the weather requires, and also Venitian shutters, so constructed, that each slat working on its own pivot, can instantly be changed from the broad side to its edge only to the light, admitting or excluding light, and air, and heat—which I found very convenient. I prefer the peanut, and the morus multicaulis to feed with; I think the white Italian equally good, but the tedious gathering is a serious objection. I think it best to cut the leaves very fine until after their second moulting, then to save time and expense, feed with branches. When ready to spin, it is best to remove them to clean shelves, and feed them plentifully with leaves. If cut, it will be better, all which will prevent their becoming *sickly*, and spinning in their own *dirt;* this is the period in which most failures occur, and may be easily prevented by a little extra attention for about a week, and the profit and success much depends upon it. At the second moulting, I have observed that only one-half or two-thirds moult the first day, and the balance the next day. I find it much the best, and saves trouble afterwards, to keep these separate. My other engagements are such, together with advanced age, as will prevent me pursuing it further. I would rent the house, fixtures, and trees, on moderate terms.

P. S.—I found but little difficulty in raising good silk the first season, without any previous experience, and it may be raised to good profit, if manufacturers will continue to give four dollars per bushel for good cocoons; and is well suited for families consisting of some women and children. I apprehend much wealth will ultimately come out of raising silk.

Gardner Furnace, *P. M.*, *Green P. O.*, *Lancaster Co.*, *Pa.*—In 1839, planted 200 mulberry trees; in 1840, fed 700 worms for eggs; in 1841, made 5 lbs. reeled silk; 1842, hatched a large lot, but they were not so well attended, and did not do as well; in 1843, hatched 200,000, did well until ready to spin, had then two or three days of excessive heat, and they all sickened and died—made only 5 lbs. reeled silk.

I use the spare rooms in my dwelling house. [200,000 silk worms jammed into the spare rooms of a common dwelling!! No wonder they all died.—J. R. B.]

I have tried the two crop worm, but prefer the other kinds.

Prefer early hatching and feeding—it is the dictate of nature. [We trust our friend will hereafter follow nature in the matter of ventilation also.—J. R. B.] I have had my silk manufactured, and have a full suit for my own wear. From all I can hear and know, I have full confidence in the complete success of the silk business ultimately, and that not remotely.

N. D. SMITH, *Washington*, *Ark.*—Having this day received, through some unknown friend, your silk circular, I hasten to despatch a brief answer to your queries:

1. In 1832, '33, and '34, small lots of worms were fed by us on leaves of the native mulberry, by way of experiment and amusement; good cocoons, and no disease. In 1840, 4,000 worms, peanut and sulphur—good cocoons and no disease. In 1841, 200,000 worms, fed partly on multicaulis, white Italian, and native—three-fourths destroyed by disease, and but 20 bushels of cocoons. In 1842, 50,000 fed on multicaulis—three-fourths lost by disease—8 bushels of cocoons. In 1843, 50,000 worms—no disease—15 bushels remarkably fine cocoons.

2. The largest portions of the worms were fed, especially in the last stages, *in shed rooms*, exposed to all the vicissitudes of the weather, scarcely protected from the wind and rain. The diseases always appeared immediately after a cold rain storm, at the commencement of spinning, during which the worms were chilled, and refused to eat—sufficient space and ample food were always provided, and much attention to cleanliness. The only *good* cocoons raised in the seasons of disease, were in a room made comfortable by fire during the cold. The crop of 1843, was raised in the same manner as the others, but had been kept back from hatching a month later than the others, by means of a supply of snow and ice obtained in March, which our previous winters had not furnished us. The worms consequently enjoyed a milder temperature, and better food. They also received a heavy sprinkling of *air-slaked lime*, every morning after their third moulting.

4. I prefer the peanut, as being more hardy, and maturing in a shorter time, and it reels more easily.

5. We have the small leaved white Italian multicaulis, and native mulberry. We should prefer the Italian, but for the greater labor in gathering leaves. The mulberry ground is ploughed and harrowed in the spring, and the trees should be close trimmed before they sprout.

6. Worms kept back from hatching until mild weather becomes settled, and the leaves fully grown, are attended with much less labor, and make better cocoons. The best we ever made, were spun up when the thermometer ranged between 70° and 90°.

7. I consider the diseases of silk worms strictly miasmatic, produced by vicissitudes in the weather operating upon the moist effluvia from the worms and the litter. The remedy is the free circulation of air, and the free use of *lime*. Lime operates by absorbing the moisture, and neutralizing, by chemical affinity, the matter from which the noxious exhalations arise—thus purifying the atmosphere.

What silk we make, is entirely done by my wife and daughters, and the younger children, without hindering my sons who are able to plough. We use the Piedmontese reel, and the twisting is done on the old fashioned flax-wheel. The raw silk enclosed, is a specimen of ten pounds reeled this season, and the cloth was woven on the common loom, and dyed with red oak bark*—my daughters are clothed in it. They have another piece of 40 yards in the loom, of a finer thread, intended for pocket-handkerchiefs. Our raw silk is intended to be worked up into sewing; but without more ample protection from the tariff, our labor will be far from profitable.

Were we to judge from our own experience, of the culture and manufacture of silk, we should think it entirely feasible; and that even in a domestic way, as a branch of family industry, industrious females, accustomed to manufacturing home-made clothing, can work with silk as easily and profitably as with wool, cotton, or flax. The raw silk can also be produced with as much ease and profit as wool, cotton, or flax.

I should like to receive your report, whether this be contained in it or not; and be assured, that if I live, the silk culture will not be abandoned by my family, unless we meet with greater discouragements than we have hitherto met.

CHARLES L. WARDSWORTH. *Hiram, Me.*—Some of my family have fed a very few worms for three or four years—use of the white mulberry—have a few multicaulis and mean to increase them. This year have fed 60 lbs. good cocoons, large peanut variety—eggs obtained of Mr. Morris, Burlington, N. J.—hatched June 20th—began to spin in thirty-two days—a very few died after they began to spin, but in general they were very healthy.

I use an out-building 20 by 15 feet, covered originally with green boards, and the cracks would now average one inch in width—a loose ground floor, and none above. One large door at one end, and a window at the other—use no artificial heat—and no lime--feed on branches altogether. The door and window were kept closed in high winds, and cold spells. At other times fully open.

During our feeding, the thermometer varied very much. One day it ran from 55° to 85°. One day from 60° to 92°. One day from 50° to 80°, and one day from 50° to 88°. One thing I wish to mention particularly. After they began to spin, I found the thermometer one morning down to 44°, and the next morning down to 46°. The worms, of course, were torpid, dormant and stiff: I thought it was a gone case with them, but they revived with returning warmth, and went on with their wonderful labors, to all appearance not essentially injured by their temporary interruption, and brought out the results as above stated.

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* A fine specimen of household industry.—J. B.

The expense of cutting the bushes, and feeding this lot of 60 lbs. cocoons I am sure did not exceed 10 cents a lb., though I hired cheap.

There are a few others in this region that have made similar experiments with myself in growing silk, and with similar results. Among the number is Mr. George Fitch, South Bridgeton; Mr. James Walker, Fryeburg; Mr. James McArthur, Livingston; Mr. Dillingham, Hebron.

From this you will see, that we can grow silk even in Maine. I fully believe that this precious and invaluable product may be cultivated anywhere and everywhere, in our extended country and continent, wherever our favorite crop, *Indian corn*, can be grown.

DAVID J. OGDEN, *Rosendale, N. Y.*—I feel deeply interested in the silk business, but since I have attempted it, I have met with many discouragements. At the suggestion of Mr. Silas Smith of Springfield, I entered on the business in the spring of 1842. I purchased trees sufficient to plant 5 acres, but a cold dry spell of weather followed immediately after planting, which killed 3 acres entirely, and about half of the remaining 2 acres. I wrote to Mr. E. Morris for eggs enough to feed from them, and also from 5 acres of the Italian, which I had to cart a distance of 6 miles, but they suffered very much from a late frost, and consequently I fell short of leaves, and from about 5 oz. of eggs, I had 8 or 9 bushels of imperfect cocoons. This year I commenced feeding about 20,000 from my own leaves, which appeared to do very well until about winding time, when all died with the exception of enough to make about 3 pecks of cocoons. Last season I fed in a barn, this season in an upper room of my house on the floor with an even temperature, the thermometer not varying 10 degrees.

My information was very limited prior to my engaging in the business. I subscribed to the silk record, and had Mr. Roberts' work on the Culture of Silk, as my guide. I have observed the habits of the worm very closely and I can safely say *I have seen all the diseases that it is subject to*, and I believe the nearer we can get them to a *state of nature* the greater the success. I feel confident that no plan that I have yet seen can compare with Mr. Gill's, although I have not tried it. When I commenced feeding my last crop I put some on the trees, and they grew *four times as fast as those fed in the house;* and I believe from that experiment, that many diseases originate in the early stages of the worm, that do not show their fatal consequences until the last age. If, therefore, some plan can be pursued that will give them the same amount of free air that Mr. G.'s plan gives them after the second moulting, I think our success will be certain. You will please send me one of the Reports of the Convention, and whatever the cost may be I will get it to you.

My ill success has prevented others in this vicinity from entering into the business.

P. S. I am requested to mention by Levi McKeon that he has fed from 2 to 3,000 worms for the last five years, on a flat surface, and has not lost over 2 per cent a year, and he thinks the business is practicable.

Lincoln Jacob, *Hingham, Mass.*—About the middle of June I hatched two or three thousand worms. They spun well. About the first of July I hatched a large lot—they did well until they began to spin. At this time the weather was very hot and dry; the worms began to be very feeble and die; in one week they nearly all died. I then hatched six or eight thousand; they spun well; about the middle of Sept. used artificial heat for one week at the close.

By the way, I think I had the large lot altogether too thick.

I am more convinced than ever that water does not hurt the worms. (I presume you recollect I so stated last year at the convention,) I believe if I had sprinkled my leaves with water this season when the weather was so very dry and hot I should have saved my worms.

Enoch Bacon, *Southbridge, Mass.*—In the fall of 1841 a brother of mine at the west recommended the silk growing business to be suitable employment for invalids and aged people. Being broken down by infirmities of age, I listened to the recommendation, and made some small calculations to go into the business. I therefore procured 2,000 trees—multicaulis and Canton—which I laid down in the spring of 1842, and from them, with the help of some white mulberry trees in the neighborhood, I raised 15 lb. 8 oz. cocoons, saved a part for seed, and reeled 4 lb. 2 oz. first rate silk.

In May, 1843, I set out something more than 5,000 roots on sixty rods of land, and laid down some cuttings. So I have now 7 or 8,000 trees, and have raised this year 3 lb. 11 oz. of reeled silk. I had 48 lb. 4 oz. of cocoons. I saved 3 lb. 12 oz. for seed, and reeled 44 lb. 8 oz. I was disappointed about having eggs to hatch late. I had foliage enough to feed many more. I find there is much to be learnt in growing silk. I have had three sorts of worms; sulphur, mammoth white and peanut; the two former kinds were very healthy, fed well, wound and yielded well. The peanut, I think, according to the experience I have had, are more unhealthy than the others. They may make a better ball, but I think it takes four worms to get three balls made up of artificial heat. Used no lime, except for whitewashing, and on the floor.

I think the silk culture is much on the gain, and will be a business of importance to the United States. I advise every man engaged in it to hold out with good courage. Difficulties always attend a new business. We shall soon surmount them all—have already done this in regard to many. I am confident that there will be more done in our town the coming season than ever.

H. P. Byram, *Brandenburg, Ky.*—With pleasure I respond to the questions contained in the "Silk Circular" of the American Institute.

1st. I have fed silk worms to a greater or less extent in the State of Kentucky, every season except one, since the year 1837, inclusive, and generally with good success; loss by disease in no crop to exceed 15 per cent, and often not over three per cent.

2d. I have fed in enclosed buildings, ventilated by doors, windows, and openings under the latter, &c., and heated by a stove when necessary.

3d. The present season I fed in an *open shed* with decidedly good success; worms healthy and wound large fair cocoons.

4th. I have fed every variety of worms that I could procure, and give the preference to those called the *Chinese Imperial*, and a variety represented to me as peanut, superior to all other varieties of that name that I have seen, still resembling some of them in color, &c., which is (the worms) white, and the cocoons white and nankin, but large, firm and heavy, and reels freely.

5th. I fed from the morus multicaulis in the first stages, and in the last stage use all the morus alba (large leaf) and Canton that I can procure—the latter kinds yielding the most silk, but the morus multicaulis producing a finer fibre, and which reels more freely, and in feeding in this way secures both advantages in some degree.

The morus multicaulis should be cut off near the ground every *three* years—one *third* of the field each year. The other varieties I *head down* every year. I feed branches in the last stages.

6th. I have hatched and fed worms in every month from April to August, the earliest fed always producing the heaviest cocoons. The latter equally healthy, when the eggs have been properly kept and managed. But few persons have succeeded in late feeding, from the want of proper care of the eggs.

7th. The causes of bad success that have come to my knowledge, have been owing either to bad eggs, or badly kept; or the want of free circulation of air in the apartment.*

8th and 9th. ——.

10th. The hatching of eggs can be perfectly retarded by being placed in a tin box, enclosed in a wood one, and suspended in the body of the ice, near the bottom of the ice-house. This is done by placing a long box, cut in three lengths and stood on end, and placed in soon after the filling of the ice is commenced. The top joints can be removed as the ice settles. The eggs at no time to be above the body of the ice. They should be placed in the ice in February or early in March.

So far as my observation extends, (and I have examined the subject with much care,) I am led to the conclusion that early feeding, in open sheds that can be closed on either side at pleasure, will be the most successful method for general adoption. Yet from experience I believe that feeding can be carried on successfully from May to October, on an extensive scale, upon an artificial plan, when art is applied in aid of nature; that is, to aid ventilation by fire, in warm sultry weather, and in cold weather, to furnish a constant supply of fresh warm air.

P. S. Dr. Charles Stuart of this State, by mere accident three years since, was induced to try the plan of open or shed feeding, and has continued it for the last two seasons with every desired success.

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*See the details of my experiment, showing the necessity of thorough ventilation, as published in the Burlington Silk Record in 1841. Also in the Annual Report of the N. E. S. Convention, 1842.

MARTIN PHELPS, *Preble, Cortland county, N. Y.*—Have fed worms two seasons—business entirely new—every thing to learn by experience. The first season hatched 12 to 15,000 worms—much trouble about leaves, but after all carried them through in 38 days—had good cocoons, and 4 lbs. good raw silk, which my daughter has made into sewings.

This season had some trouble about eggs, but finally got and hatched three-fourths of an ounce. They were very healthy, and brought out good results again—how much silk I shall have I cannot yet say.

We have this year the peanut variety. The cocoons are very large and handsome, more so than they were last year when we fed two months earlier—we fed in a low one story building, 24 feet long by 14 wide, enclosed tight, but no ceiling, with four windows and two doors—we use a box stove. We use the morus multicaulis—have one-eighth of an acre that was planted a year ago last spring, in rows about two and a half feet apart—hoed them well three times; they grew finely and yielded well. We cut them in the fall and left the roots in the ground over winter. Almost all lived and came forward ten days earlier than those planted out this spring, and yielded near double the leaves through the season. The tops that I cut off I put in boxes and filled them with dry sand, and kept them in the cellar. They came out this spring fresh and good. I planted them in furrows about three feet apart—I took a great deal of pains in covering them, and should think almost every bud grew. Some I took up, roots and tops together, and buried in a dry place. They kept well, I set them out standing. They have done well, but do not think it is the best way. I shall have all my roots in the ground this winter. I have now about half an acre, and if they grow as thrifty as they have this season, I can feed 50,000 or more.

THOMAS MELLEN, *Madison, Madison county, N. Y.*—It would give me much pleasure to attend the Fair and Silk Convention, but the state of my health forbids. I attended the late Fair of the State Agricultural Society at Rochester, as one of the committee of judges on silk and silk fabrics; the weather being warm and favorable. The exhibition of cocoons, raw silk, sewing silk and twist, and various silk fabrics, was, upon the whole, large and encouraging, and the exhibitors quite numerous, and the most of them quite satisfied with their experiments, and encouraged to progress in the culture of silk. The greatest defect I noticed was a want of skill in reeling. But to proceed to answer the interrogatories contained in your circular. And first, I have fed silkworms six successive years besides the present, and first: in 1837, a cold year, I fed a small crop, or brood. They were a longer time in maturing than usual, but healthy, and made good cocoons.

In 1838, I fed two small crops, the summer was hot and dry, or mostly so; the worms were healthy, matured and wound in six weeks.

The results good. In 1839, a very cool season, I fed two crops, and different kinds of worms. They were generally eight weeks before they spun, but very healthy, and spun good cocoonss. 1840, I fed three crops, of different hatchings; the season was warm and the worms did well generally; but one brood, that was in its last age about the middle of August, when we had a week of excessive hot weather—the thermometer ranging from 85° to 96°, with hot nights, and on the second day of this hot weather, for the first time, I observed the appearance of the yellows. Believing it to arise from too excessive a degree of heat for the worms at that age, I ventilated the room, so as to give them the *whole* atmosphere, *night* and *day*, removed the diseased and dead worms, kept them clean, and arrested the disease, until the weather became cooler, and lost but a small part of the brood. They produced excellent cocoons. I was the more confident that the constitution of the silk-worm, in or near its last age, could not long endure a heat of 85 to 90 degrees, from the fact that I had on forms in the same room, a brood or crop of some 30,000 between the 2d and 3d moulting, and they passed the 3d moulting during this same hot weather, with perfect safety, although not more than ten feet from the hurdles on which were the diseased worms. Not one of this crop was affected with the yellows, or other disease. And I will here observe, that I have never seen or known this disease to attack the silk-worm except in or near its last age; and not then, except there is a continued heat of several successive days, of 80 degrees and over. I will also here observe that at the time above mentioned, I had a neighbor that had a crop of silk-worms that had done finely until this hot weather commenced; some had begun to spin, but he could not increase the ventilation of his room, and he literally lost his whole crop, and this was the case of all as far as I could learn, who had silk-worms in their last age at that time; which discouraged many new beginners. In 1841, 2, and 3, I have fed silk-worms, and with general good results; and whenever anything has taken place unfavorable, I could trace it to a satisfactory cause. In 1841, I had a family or crop of over 20,000, which would not mature until about the 10th of September. I fed them until after the 2d moulting on leaves of the morus multicaulis, and then about a week on the leaves of the white mulberry, of the Florence variety, and they were perfectly healthy; when, for two days I was forced to resume feeding on the leaves of the multicaulis. The result was, that the next day after resuming the feeding on multicaulis, I observed many that were sick, and vomiting, which increased the 2d day, and many were already dead. The third day I resumed feeding on the white mulberry, and changed the worms for several successive days. Notwithstanding every care, I lost the major part of the crop, and evidently by feeding for two days on *two succulent leaves.* This was the greatest loss of silk-worms that I have experienced during all my feeding. I have always used the ground-floor of a wing of a dwelling-house, or a chamber to feed in. I have not generally regulated the temperature by artificial heat; but at times, in some seasons, I have found it necessary, and have done it with success, and particularly when the nights and mornings were so cool that the worms remained torpid. The present year I fed a small crop in a chamber where I had no means of regulating the temperature, and the worms were very healthy, and some had begun spinning, when the fore part of August commenced chilly easterly winds, succeeded by a long continued easterly storm, for nearly a week. The worms became sluggish the first day of the east wind, and eventually became quite torpid and did not eat much. During the course of the storm a considerable many died without any apparent disease. At the same time a neighbor had a crop of the same age, fed on the ground floor of a dwelling, in which room there was neither stove nor chimney, and the worms became torpid the same day as mine did, but in the adjoining room was a stove which was gently heated the first night of the storm, and a door to the feeding room thrown open, so as to temper the air in the feeding room, through the storm. The result was, that the worms recovered of their sluggish or torpid state, ate well, and did well, and none died. From this, and other experiments made in previous years during very cool weather, I have come to the conclusion that, in this region of high country, there are times that it is necessary to regulate the temperature of a cocoonery, in order to promote the health and labor of the silk-worm.

I have never fed in an open shed or tent, nor has any one in this region, but I have no doubt but that it is a safe method where there is a mild and equable climate, but in this region I doubt its practicability; being situate in nearly 43° N. latitude, and between eleven and twelve hundred feet above the level of tide water at Albany. We have in every year during the time of feeding, some very cool weather, both days and nights, when it would be necessary to regulate the temperature of the cocoonery by the heat of a stove I have in all cases used a stove where I have regulated the temperature of a cocoonery.

I have a preference for the peanut varieties of the silk-worm, and particularly of the Singapore Nankin colored kind; and a good opinion of the mammoth, sulphur, and white.

The trees I use are the morus muticaulis, or I began with them, but in this location they cannot be relied upon. The tops kill in winter, and sprout too late in the spring for early feeding, and the leaves are too succulent for safe and successful feeding in this location. I only use them to feed young worms on for a few weeks, and then change their feed to some other hard wooded kind, viz.: the morus alba of the Florence variety, which is harder than the common Italian; and on the Canton, the Broosa, and on my new kind that I obtained as the Oregon mulberry. My trees are mostly planted in hedge rows, and cultivated with plough and hoe, or should be. I have satisfactorily tested, and found a difference between the multicaulis and the alba, the Canton, Broosa, and my new plant, and find all the latter far superior, in this region, to the multicaulis, as regards the health of the worm, and the fineness of the cocoon, and the quantity and quality of the silk.

Among my acquaintance where bad success has attended their feeding, my opinion is that they were not sufficiently ventilated, nor kept sufficiently clean, and by feeding too succulent leaves during the last ages of the worm.

I have generally found early feeding the best and safest, though I have had good success with some broods fed late. In this region, after the commencement of the dog days, the leaves of the mulberry become punctured with insects, and the juice oozes out, and the leaves become spotted and rusty, and unfit for feeding to silk worms. This is one objection to late feeding. The other is, that in most years, in this region, we have frost early in Sept., which kills or injures the leaves.

I have made no experiments to convert the leaves of the mulberry into paper, or successfully to separate the inner bark so as to be wrought into fabrics. In regard to the culture of silk in this country, but little has been done. Some three or four in this town, and a few in some of the adjoining towns, continue to produce some silk, but most who commenced it became discouraged, on account of their trees winter-killing, or being broken down by snow drifts during winter. At the northerly part of the county there are several who have had good success, and purpose to continue the business, and increase it; that part of the county being 7 to 800 feet lower than the middle and southerly parts. The different kinds of the mulberry grow much better, and endure the severity of the winters there.

This part of the county, and much of those adjoining, is thought to be too elevated for the successful culture of the mulberry, some favorable locations excepted. It is better adapted to grazing, the products of the dairy, and wool growing. What I have done in the production of silk has been experimental, and the only discouraging feature in relation to its being made a profitable business, added to farming, and where the labor is performed by females and children, is the frequent winter-killing of most kinds of the mulberry tree. My new plant has as yet withstood the severity of our winters, (except the unmatured parts,) but I have suffered much by having them broken down by heavy snows, and snow drifts, and particularly so the last winter, when snow accumulated to an unprecedented depth, and lay until nearly the middle of April, thawing and becoming saturated with water, and then freezing at nightto the branches and main stock, while thawing continued at the bottom, which caused the mass of snow to settle, and this broke the branches and main stem badly. I had some 200 of my new kind, which were set for standard trees, from two to four years growth, from layers which had withstood the previous winters, which were entirely broken down in this way; but I had suffered them to branch out within three and four feet from the ground with heavy tops, which exposed them to the heavy snow drifts. Those that stood out of the drifts were not broken, and were not killed by the winter. I can raise them into standard trees here, by trimming them so that their branches shall be above the accumulation of the snow. Their leaves are large and heavy, and the worms feed on them with as much avidity as on any other kind known to me, and grow as well, and have, in all cases, been more healthy than worms fed on any other kind that I have, and produce firm, heavy cocoons, and the quality of the silk has in all cases been far superior in lustre to any I can produce from any other kind of mulberry. In proof of which, I refer to the enclosed sample, which was produced by feeding silk worms on the leaves of the tree above referred to, and such as I have produced from it every year that I have used it, which is five. To whatever class of mulberry this belongs, it possesses rare qualities for the production of silk of a superior quality. I had increased them to about 4,000, when I hired them transplanted in the spring, and not being able to superintend the operation, they were slightly done, and a drought ensued, and I lost almost all of them. I have since increased them to about 800, but being broken down last winter, they are small, and my health has not been such as to permit me to give them that attention the last summer that they required. This tree, if multiplied and introduced, cannot but be a valuable acquisition to the silk culturists in the northern States. I respectfully request that the enclosed specimen of raw silk be exhibited to all the gentlemen composing the Silk Convention, and particularly those of the northern States. And if the corresponding secretary of the American Institute will have the goodness to inform me of the opinion of good judges of the article, or how it compares with other specimens as to lustre, he will receive my sincere thanks. Hoping and trusting that the American Institute will continue to be eminently successful in promoting whatever is useful, I remain, yours, &c.

MRS. HARRIET H. A. DINSMORE, *Ripley, Ohio.*—In compliance with your request, that all silk growers, however small their operations, should reply to your Silk Circular, I would inform you that I have fed silk-worms three summers, with very different success each summer. The first year I fed two lots of worms, the first of which (fed upon a mixture of multicaulis and white mulberry) wound up in four weeks, producing very large firm cocoons. The next lot appeared to do well until the fourth moulting, after which, many of them became diseased and died. The residue spun thin cocoons. The failure attributed, at the time, to bad eggs.

The next summer's feeding was almost an entire failure. The produce from 40,000 or 50,000 worms, fed at different times, was less than one bushel of cocoons, and those of an indifferent quality. Attributed principally to the unfavorableness of the season. While feeding the largest lot of worms I was necessarily absent from home a few days, during which they first showed symptoms of disease. On my return I immediately removed them to clean shelves—gave them more room, and sifted lime over them every morning until they were quite white. They fed well and appeared healthy until time of winding, and I have no doubt would have spun well, had the weather been dry as well as warm. *It was rainy and very warm.* Great numbers of my worms became yellow, the skin would break upon the slightest touch, and a yellow liquid flow out. Others exhibited a flabby appearance and soon died. The cocoonery was very offensive, and I should have been entirely discouraged and abandoned the business altogether, had not my neighbors been equally unsuccessful. I consider unslaked lime a powerful disinfector of disease among silk-worms, and very, I would say, absolutely, necessary to be used in warm wet weather.

The past season has been very favorable for feeding, and so far as

I know the labors of those engaged in it have been crowned with success. My late crops of worms were not as healthy and did not produce as many cocoons by one-third as those fed early in the season. I am of opinion that in all cases where the hatching of the egg is retarded much beyond the natural time (the expanding of the mulberry foliage,) it affects the health of the worm.

The building used as a cocoonery was formerly a dairy house, 24 by 18 feet, lathed and plastered, with four windows and a door opening to the north. Have fed the sulphur and salmon colored peanut worms—prefer the last variety. Have about a quarter of an acre of multicaulis of three years growth. The first autumn a part of the trees were taken up and buried in the ground, and a part left standing. Since which they have all been left during the winter. And the trees which were not taken up the first winter, are now larger and produce more foliage than those which were.

The corn cultivator and hoe are used in cultivating them. I am inclined to think the cause of failure in many, perhaps most cases, where the multicaulis is used for feeding, arises from using leaves that have not sufficient growth or thickness and are not ripe. The young and under leaves have not sufficient nutriment, or in other words, not *sufficient material* to produce silk. The worm fed on such leaves passes through its various and wondrous changes, lives the time prescribed by nature for its existence, then either stretches itself out and dies, or winds a thin indifferent cocoon, *because it has not silk enough to wind a better*. This also, is the opinion of many others with whom I have conversed on the subject.

I was induced to commence feeding silk-worms, as an employment better suited to my strength, than taking care of a dairy. It also afforded a prospect of future useful and profitable employment for a family of small children.

Should the information I have communicated, assist in any degree the important object you have in view, I shall feel very much gratified in having written it.

WM. DOOLITTLE, *Perryville, Madison Co., N. Y.*—I have fed worms for three years. The first year fed some for a neighbor on what we call the lowlands, where the fog from Oneida lake continues in the morning till seven or eight o'clock. Raised about two bushels of cocoons—ought to have had many more—attribute the failure to the eggs commencing hatching in the cellar, and to cold, damp mornings, occasioned by the fog, &c. From these cocoons I saved some of the best for seed, and succeeded, the second year, in raising 75 lbs. of very good cocoons of the Nankin peanut variety. Saved for seed, such as were perfect cocoons, but not the hardest and best (having been informed that they were equally good), and the result has been this year an inferior quality of cocoons. My first lot this year was small, the second were killed, mostly, by changing the feed from multicaulis to black mulberry. Our multicaulis was much injured by a storm of hail (literally torn in pieces), and I was compelled to use the black mulberry leaves, and they were so coarse and tough, that most of the worms died, and I raised only 75 lbs. of cocoons this year. I have fed principally on multicaulis, but for experiment, have fed 2 or 3,000 each, after the fourth moulting, on branches of the multicaulis and white mulberry, and could see no particular difference in the quantity or quality of the cocoons. I have fed a few of the sulphur variety of worms, but mostly peanut, and prefer, as far as my experience goes, the Nankin peanut. Think the business will yield a fair compensation for labor.

P. S.—I have a cocoonery with a stove, and regulate the temperature according to judgment, by fire, ventilation, &c.

CLARK AVERY, *Perryville, Madison Co., N. Y.*—I shall make my report by replying to your questions in order, and as they are in the Silk Circular.

1. I have fed worms four years. The first year fed a few only. The second year raised 98 lbs. of cocoons—good success. Third year, raised 56 lbs. cocoons—did poorly, my eggs were not properly taken care of, commenced hatching prematurely, in March, and hence my crop of worms was small and of an inferior quality.

2. I feed in a cocoonery, and regulate the temperature by a stove and ventilation, according to the dictates of judgment.

3. I have not fed in an open shed or tent.

4. I have generally fed the sulphur, but from a little experience this year, I prefer the peanut.

5. Multicaulis chiefly. I cut them off some five or six inches from the ground, in the fall annually, and plough and hoe them as farmers usually do corn.

6. Early feeding, according to my experience, is much better than late.

7. As to "bad success in feeding," I can say nothing but what is found in the accompanying reports.

8. I have not tested the use of mulberry for paper, and cannot this year.

6. Have not tried any process of rotting in order to separate the bark of the young mulberry from the woody fibre so as to convert it into paper or silk fabric, and cannot do so this season.

Most certainly there are difficulties to be met in the cultivation of silk, but doubtless care and experience will enable us to overcome them, and silk will, by and by, become one of the staple productions of our country, and the culture and manufacture of it amply repay the industrious for their investments and labor.

DAVID IRISH, *Perryville, Madison Co., N. Y.*—1. Have fed worms three years with uniform good success. First year, a few—second year 50 lbs., this year 130 lbs. cocoons.

2 and 3. I use a wagon-house, and also an open shed, and the worms do equally well in both. Use no artificial heat—temperature is not regulated at all.

4. Have raised the peanut worm, and two kinds of sulphur, one much better than the other. I prefer the best kind of sulphur (the mammoth sulphur I suppose they are); they are a more healthy worm than the peanut, and make a good and large cocoon.

5. I use multicaulis trees—hoe them in the early part of summer, or spring, as farmers do corn, and cut them down near the ground in the fall, and plough a furrow on each side of the rows, turning the earth upon the plants to preserve the roots of the trees alive through the winter.

6. I have, and find early feeding much the most certain and profitable in its results.

7. Some have injured their worms by feeding tender and succulent leaves after the fourth moulting, and some by changing from the finer varieties of mulberry to the coarser and more juicy, after the fourth moulting. One man destroyed a crop of worms by curing cocoons with camphor in the cocoonery, and I have heard of one who poisoned a crop to death by smoking tobacco in the cocoonery.

8. I have not.

9. I have not.

[The three last named gentlemen unite in presenting the following very just and sensible remarks.—J. R. B.]

We beg leave to subjoin a few general remarks applicable to the several foregoing reports, and expressive of our united experience and practice. We have heretofore made the raw material into sewing silk of a very superior quality. We find no difficulty in competing with the Italian in our home market. Mr. Irish presented some at the State Fair last month, and took the second premium on manufactured silk, or in other words, the highest prize on "sewings" in the State. As to management of worms, &c., eggs should be saved from the best cocoons of the first crop; they may be kept in any cool, dry cellar, or in a chamber without fire till spring, and then should be buried till wanted. A cocoonery should always be kept perfectly sweet, and well ventilated. None but mature leaves should be given to worms after the fourth moulting, and if the leaves are changed, it should always be done gradually, and from the coarser to the finer varieties of mulberry. All dead worms should be removed at once—the cocoonery should be kept as quiet as possible—care and experience are requisite in order to generally succeed in the business. We do not think the culture and manufacture of silk will be a giant speculation, pouring wealth in mighty floods upon the careless and indolent; but we do think silk is destined to become a great staple, and the business will be as profitable as other departments of industry.

Whenever we have failed, we think we can trace it to some mismanagement on our part, and believe experience will enable us to prosecute the business successfully and profitably.

MOSES AND ASENATH GOUGE, *Northampton, Mass.*—We present the following statement, as the result of our experience in the silk culture:

1st. We have assisted feeding worms four or five years, but not till the present year have we taken the *whole charge* and responsibility on ourselves.

This year we took the whole charge and supervision of one of Dr. Stebbins' feeding establishments, in this town; for which he paid us a stipulated and satisfactory price by the pound (18 cents) for all the cocoons we should raise for him. We and two boys were in the business, and were well paid, and should be willing to engage to him again on the same terms, as it has given us a better return than we could have realized from any other employment. Had the late crops succeeded as well as the first, we should have made money fast enough.

2d. We feed the worms on tables of boards and on hurdles, in two long rooms, well lighted by windows on each side; but at the suggestion of Dr. S., the glass windows were removed, and a free circulation of air *day and night* admitted to every part of the rooms, from the sides and doors at the ends.

3d. We have never fed worms in an open shed or tent, and from the success we had with the early crop this year, think that the rooms were sufficiently ventilated for all purposes of open feeding and health of the worms. We were not annoyed by the unpleasant effluvia of close rooms or the attendant sickness. Our worms were fed whenever they would eat—from early morning to the close of the day, in consequence of which we had a lot of large and heavy cocoons, the admiration of all who saw them, and visitors were not a few, purposely to see the sight.

4th. We have formerly fed the sulphur, and the two-crop worm, but they were not as profitable as the peanut variety, especially the golden peanut, which we feed this year and decidedly prefer.

5th. In former years we have fed from a great variety of mulberry, through all the stages of feeding, and the leaves being chopped fine, will answer for two or three weeks, but where the *Canton* can be had, such we had this year, and the Asiatic, should want no better leaf or branches.

We think there is a decided advantage in using fine chopped leaves the first two or three weeks; the whole leaves appear to smother the worms. If the worms are carefully attended to in the early stages, they will be more able to help themselves when fed with the branches of the Canton and Asiatic. The half starved young of any species tell the story.

6th. We have had sufficient experience of feeding early and late crops, to satisfy us that early feeding and the one crop system, is the only safe and profitable course—cocoons of late crops, are usually very thin, soft and light, affording but little silk that is worth reeling. If we had a million of worms to feed, we should prefer to have them hatched so early as to finish winding by the 4th, or the middle of July at the farthest.

7th. Bad success in feeding, may result from bad eggs, often made such by bad management, in or out of the ice-house, or proving such, by late feeding; but more frequently bad success results from careless, inattentive feeding, and want of air.

We have this year fed from early morn to evening, as often as the worms would eat, the same as we should do in fatting a lot of pigs.

Some of the eggs we had were kept in a chest in an upper room until the time of hatching, and they did well. We think that if the eggs should be left in a shady and cool part of the cocoonery, or outbuilding, it would be much better than the ice-house.

Having so good luck with our first crop, and wishing to make as much as possible by the undertaking, we were supplied with eggs kept back from hatching, and the whole of 10 or 12 ounces of eggs proved a failure.

8th. We have no knowledge of the making of paper from mulberry leaves, but we hear there is a lot at the paper-mill for that purpose.

9th. We have no knowledge of the bark of the mulberry being used for silk stuffs—unless the old *Bark silk* handkerchiefs, so called, are made of the bark.

10th. From the experience of the past and the present year, we can recommend the feeding of only one crop, and that an early crop. Should an early frost, as is sometimes the case, cut off the first early leaves, the worms may be sustained one or two weeks by the use of early lettuce, currant or black-walnut leaves, or in another and better form as suggested by Dr. S. It is to prepare and dry some foliage this season, which we propose to do ourselves. This can be pulverized and moistened, and a little flour mixed with it, and the worms will eat it, as the Doctor informs us.

JAMES C. CHURCH, *Poughkeepsie*, *Dutchess Co.*, *N. Y.*—In 1841, I fed about 150 worms in my house garret, of the peanut and sulphur kinds. With the exception of a very few, they all wound up, and produced good cocoons. The following winter I built a cocoonery, 33 feet by 20 feet, two and a half stories high, ventilated by sliding windows; I have used no artificial heat.

The next spring I planted one acre of branches of the multicaulis, by laying them in drills eight feet apart. They came up very regularly, and grew finely.

I that season raised 49 lbs. cocoons, producing 4 lbs. 10 oz. silk, including the pierced cocoons that were spun into coarse silk.

I have never fed in open sheds. I prefer the peanut kinds. I use chiefly the multicaulis. To ascertain which would produce the most foliage, I cut some to the ground; others I gathered the leaves. I give the latter the preference. I have fed early and late. I have been the most successful in early feeding. I have seen how some others have managed in feeding, and found they had too much litter under the worms, causing heat; and disease follows, notwithstanding lime was plentifully used. I have never tested the use of the mulberry for paper.

Wm. A. Flippir, *Cumberland County, Va.* [Addressed to J. A. B.]—As you have requested that all silk growers should inform you of their success on the plan of open feeding, and you would embody the same in pamphlet form and send one to each of those who should try the experiment, I thought I would inform you of the success I had with a small lot of worms, fed in an *open shed*, the last spring. I had commenced the experiment before I saw your views on the subject of open feeding, believing it to be the only successful mode, if they could be protected from birds, insects, &c. My worms were very healthy, although there were several frosts during the time of feeding. I have no doubt they would have made a first rate crop of silk had they not been destroyed by the *wasps*. Had they been fixed on Mr. John W. Gill's plan, with cradles and fans, I think that would have been a sufficient protection; the fans, no doubt, would be first rate to drive off the wasps. I should have been more particular with the crop, had I seen your proposals sooner. I fed three ounces of eggs in a house that I built for the purpose two years ago. They made about twenty-one bushels of good cocoons. If it is convenient, I would be glad to receive one of your pamphlets, and if open feeding proves to be the most successful, I shall adopt that plan the next year, and enlarge my operations.

Cyrus Thompson, *Highgate Spa., Franklin Co., Vt.*—I have fed silk-worms in a small way for the last six years, and am satisfied from my own experience, that with proper management it may be made a profitable branch of business, even as far north as here. I have about three acres of mulberry trees, two of white Italian and one of morus multicaulis. My whites are in hedges, twelve feet apart, and my multicaulis four feet. I never lost many trees by our cold winters, although the morus multicaulis kills near the ground. I have always fed two crops of worms in a season, and have always lost some in the *last* crop, and always succeeded well with the first. I have come to the conclusion that I will feed but *one crop*, and hatch them about the first of July.

I have a building on purpose to feed in, well ventilated, and no floor to it. This year I hatched one-third my eggs about the 1st of July, and made eighty pounds of cocoons of the first quality, and from the remaining two-thirds, with the same treatment, I got but sixty-three pounds, and those were not so good. I used no fires in the cocoonery this season, but last season I kept a fire night and day. My worms, however, did not do well, and had it not been for the State bounty, I should have lost on the last crops. Each year's last crops hatched 1st of August.

I should be highly pleased could I attend the convention, which I think will be very beneficial to the silk cause, by diffusing useful knowledge in the report of the various experiments and results in different parts of our country. Proper information on this subject distributed and brought within reach of all who are enquiring, must tend to advance the business, and lead to results, not only of individual benefit, but of general good to this country.

There are a number of my neighbors engaged in this business, and their success has been generally about the same as mine. We have always reeled and made our cocoons into sewings, and sold it to the country merchants in exchange for goods. We have this year reeled our silk for sale, and think we are making an article that will sell for cash in market. If so, it will be very encouraging to us, as it is very tedious to make sewings by hand.

In 1840, we made 67 lbs. cocoons.
1841, " 51 "
1842, " 130 "
1843, " 143 "

And from my experience in the business, I am satisfied that it must, when there is proper information acquired on the subject, become a profitable branch of industry, and tend to general good, by giving suitable employment to thousands of destitute, but meritorious inhabitants.

With these views, I feel deeply interested in the convention, and have no doubts but your investigations and report will happily result in advancing the silk cause in this, our country.

Rev. D. Benedict, *Pawtucket, R. I.*—I am sorry to have it to say, that I have been unable to pay much attention to this business this year, so wholly engrossed is my time, my thoughts, and all my powers, with my historical pursuits.

I have done nothing in feeding this season, only to raise enough for eggs for another year. I gave away all my eggs but a few for this purpose. I am fond of the business, if I could attend to it. My trees lived well the last winter, and I have left them without any care this summer, and now have leaves in abundance.

My silk weaver made a failure of it. I kept him on hand a good while, at some sacrifice. His skill was sufficient as to *weaving*, but he had not the preparations for getting out his webs, and knew not how to make them. He made some good *plush* out of a short *web* he had on hand, and then he was up a tree.

I have heretofore united with much satisfaction in the experiments in the silk business, and am fully convinced, so far as the practicability of the thing is concerned, that the growing of silk will in time become an extensive and profitable business in this country.

As to worms, the peanut, beyond all doubt, turn out the most silk—but they are long-lived, are great eaters, and many will fail towards the last. The grey worms are also good. But I am more and more in favor of the two-crop worms. If they do not turn out so much, they require less time and attention, and the second crop carries us into the full growth of the mulberry leaves. And after all that is said to the contrary, I am decidedly of opinion, that it is not good to keep them back, by ice-houses, far into the hot season.

Cleanliness, air, and regular and full feeding, are the grand secrets. My small crop this year was attended to in *my* scientific way, like fatting pigs. I kept them with a full supply, and none could do better. If I could have my way, however large the crop, I would have the leaves always fresh, and give them often and plenty, and never leave them on thick mouldy beds.

I do not know the fact, but I suspect that the finest and most costly silk in France is made from the small two-crop worms.

J. L. Woodward, *Milbury, Mass.*—My operations have been so limited, they are hardly worth communicating—yet they may serve to establish general principles in regard to this enterprise.

In 1839, I purchased a lot of multicaulis, Canton, and Alpine trees. I planted the two former in cuttings—one-half of them did not come up—took them up in the fall, and put them in the cellar. Next spring planted them, laying the tree, root and all in furrows, four feet apart, covering light. They came up first rate, and are now flourishing trees—have not taken them up for two years past—they have kept well during the winter seasons. The soil is of a loamy texture. I have fed worms four years—have generally had good success—have fed early and late—consider early feeding decidedly best—have fed in an inclosed building, well ventilated. I find a *free circulation of air indispensably necessary.* Fed the peanut and sulphur—think the sulphur more healthy. I see nothing to prevent growing silk in this country, and to profit, if managed judiciously.

James W. Chappell, *Lima, Livingston Co., N. Y.*—I am highly gratified in observing the praiseworthy efforts of the American Institute in regard to the growth and manufacture of silk. Successful experiments have now become so numerous, that no doubt ought to exist as to the feasibility of the enterprise. Five years' experience has fully satisfied me, that the silk culture is not only practicable, but can be made amply to remunerate the culturist for his labor. During those five years, I have produced about forty bushels of cocoons, and the result of each year's operations has been complete success.

In 1842, I built a cocoonery, 20 feet by 60, two stories high. It has twenty-six windows, furnished with blinds, and six doors. The building is plastered throughout, which tends to prevent sudden changes in temperature, and also is more easily kept free from insects and mice, the great enemies of the silk-worm.

In regard to *open feeding*, I would say that I have always fed *with windows constantly open both day and night*, and the doors during the day, and am fully convinced that this is the *true system* for successfully carrying on the business.

I have never used artificial heat—have used air-slaked lime, and have found the early part of the season better than the last for feeding. Of the different varieties of silk-worm, I consider the large Nankin peanut preferable to any other with which I am acquainted.

I use the leaves of the multicaulis tree exclusively for feeding, of which I have about three acres. The trees are cut down within about two inches of the ground in the spring; have received no material injury from the winter, and many of them have grown the past season to the height of seven and a half feet.

SAMUEL WAGNER, *York, Pa.*—I have for two or three years been engaged, in a small way, in testing the practicability of introducing the silk culture in this country. I have a growing interest and an increased confidence in the business. I should esteem it a great favor to receive a copy of the proceedings of the *Silk Convention.* The small number of persons who engaged in the silk culture, in this State, without any reference to a mulberry tree speculation, are, I believe, very generally persevering in their enterprise, though the withdrawal of the State bounty operates unfavorably in some cases.

O. G. CATHCART, *Williamsburgh, Mass.*—I commenced feeding silk-worms with no information upon the subject except that obtained by reading, and have prosecuted it as a part of domestic industry.

Have fed worms six years, and have been so far successful that I have been induced to increase my stock of trees and worms yearly.

The season past have fed worms enough to make 49 pounds of cocoons, from which my wife has reeled the silk on the common reel, and shall have ten or twelve hundred skeins of sewing silk; have made sewing silk of all that we have raised from year to year, and sell it either for cash or in exchange for other goods, as readily as any product of the farm. Am satisfied that the cultivation of silk, as a branch of family industry, is profitable, and might be made more profitable to a family of children and youth, than most business, that they now follow. Children and youth can pick leaves and feed worms; the mother and daughters can convert the cocoons into raw silk, sewing silk, hose, gloves, laces, &c.; pierced cocoons and floss into various articles.

Four years I fed in a tightly finished room, that was well aired in good weather, and closed in bad, and the two years past in an outhouse singly boarded, with a loose floor, and standing high from the ground, exposed to a free circulation of air in all weathers, and the worms have been decidedly more healthy these last seasons than they were before.

Think the peanut variety is to be preferred.

Have tried a number of kinds of trees; like the Canton best, and consider large leaved Alpines good, especially to feed in the last age.

Cut my trees down in the spring, except a few to commence feeding with; as those that are not cut will produce leaves earlier in the season than those that are.

Have tried early and late crops, and have uniformly had the most healthy worms and heaviest cocoons from the earliest crops.

Convert my cocoons into sewing silk; pierced cocoons and floss into hose, &c.

Have made no experiments that enable me to answer your questions relating to the use of the leaf or bark. I believe that success will attend the labors of those who persevere in the culture of silk.

P. S. Two of my neighbors have lost almost their whole crop of worms, which I am convinced was caused by heat and pent air.

JAMES MORGAN, *Freedom, Carroll Co., Md.*—I have fed a few worms each of the last four years, but have had but indifferent success, in consequence of having my feeding house situated too low, it being a saw-mill, 36 by 12 feet, surrounded with water, being also in a very large valley. Have never fed in an open shed or tent, but intend doing so next year. Have fed peanut and sulphur, but prefor the peanut. Have none but multicaulis trees—about 6,000 standing about five feet by two; intend planting one acre more of new land in the spring. I let them stand as they grow; plough them twice during the summer. Have raised eight bushels of cocoons this season; the first crop much the healthiest, though I lost all my first leaves by the frost on the 1st of June. I am confident that my bad success is in consequence of the situation of cocoonery, as stated above. Have not tested either the 8th or the 9th questions of your first series, and it is now too late to do so in time for your convention. I shall try the 8th, as I am a paper manufacturer.

From what I have done in the business, I am satisfied that it will be a profitable business, and am making preparations for building a cocoonery on a high and airy station, for feeding next summer.

I have one acre of new ground, which I intend to plant with multicaulis roots next spring. You request me in your letter to send you all the facts I can get relating to feeding. I know of none in this county, out of the many who entered into the tree speculation, who are feeding worms; but they are gone off, as you said in your letter, in smoke. There were many of them in this county, not one of whom are doing anything in the silk business. I am alone in Carroll county. In Frederick county Mr. Jenks and Mr. Ramsburgh are feeding in the State barracks. I was there this spring at the commencement of the feeding season. I have not seen them since, but have heard that they made superior cocoons this season; better than they ever made before. In 1840, 222 of their cocoons, as they came from the shelves, weighed one pound. They feed with the white mulberry, in an enclosed building.

JAMES WALKER, *Fryeburg Island, Me.*—Am much pleased with your plan for collecting facts in regard to the silk culture. I have had many difficulties to overcome, there being no one near me to give any practical information. I have fed worms eight seasons; have the multicaulis and white; made 12 lbs. of silk; last year, 34 lbs. After all my difficulties, I am not discouraged. I shall pursue the business, as I believe it can be made as profitable, even here, as any farming business we can pursue.

I prefer the peanut worm, as yielding much the most silk.

I was much pleased last summer to see Mr. Gill's plan of tent and cradle feeding. Let me tell my experience as to ventilation. When I first began feeding, I used a common room in my house. My worms were often diseased, but I supposed it to be a necessary *incident* of the business.

At length, as a matter of convenience, I took my worms into an outbuilding, originally used for curing hops, boarded open, like an old-fashioned barn. There were large cracks, so that the air could pass freely through on all sides. Since then we have had very little loss by disease. My feeding, therefore, must be styled *open* feeding, for it is not so confined as a tent would be—and I know I have been successful in what I have attempted to do since I have used the above building.

As to enlisting others in the business, there is one, within eight or ten miles of me, doing much. As I have been longer in it than any other, they are coming to me for information. Little can I do for them, except to tell them wherein I have done wrong.

[That is the best kind of instruction, friend Walker.—J. R. B.]

DR. JAMES MEASE, *Philadelphia.*—I rejoice to see by the papers, that you are to have a Silk Convention in New-York—regret that the state of my health will deprive me of the pleasure I should have, could I be one of the number. But although absent, I shall make a small effort to aid the great cause.

I urge the exclusive use of the Piedmontese reel, as essential to the production of good raw silk, to the profits of the cultivator, and to the excellence of the fabrics made from it. The exclusive use of this reel has been established and provided for by law in Piedmont, for more than 100 years; and no attempts to improve it in Europe have succeeded. Substitutes in the United States have been found inferior, or too expensive. The original one which I imported, in 1828, cost $14—but much neater ones are now made for $10. I shall be happy to put any gentleman in the way of obtaining one. I also imported a machine to work up the perforated cocoons, and deposited it in the Franklin Institute, Philadelphia, in 1831, where it can be examined. Directions for using it accompanied the apparatus.

ELIAS FENEYSLEY, *Ellisburg, Jefferson Co., N. Y.*—Has fed three seasons—uses the multicaulis and Italian whites—first crops good—late crops bad. Two seasons fed in a common room and corn-house. This year built a cocoonery, 40 by 22 feet—did not batten the joints—left the floor loose. Increased his grounds with trees, with a view to a regular and permanent business.

My experience, says he, is just this. The worm must be *well-ventilated*, as well as the cocoonery. Some of my worms this year were taken with vomiting. I took a part thus affected, and put them on the trees, and they soon recovered. The rest died immediately.

[Mr. F's. cocoonery is undoubtedly too close.—J. R. B.]

Michael Kline, *Reamstown, P. O., Lancaster Co., Penn.*—I commenced the silk culture in the year 1841, on a small scale without having any knowledge of the business at all. My experience has brought me to believe, that there is nothing wanting but practical knowledge of the business, to insure full and complete success. To get the Report of the Convention, and so get knowledge, is the main object of my writing, for I am determined to go on in the business, any way, right or wrong. I wish to go right.

But to your first question, I inform you what I have done in the business. In the year 1841 I raised 30 lbs. of cocoons—in 1842 I raised 228 lbs., and in 1843 I raised 350 lbs., although the frost we had in June last spoiled the leaf of my trees so much that I could not do any thing in the business the greatest part of the best of the season this year.

2d. I fed my worms in a small frame barn, and the temperature was not regulated until I came to the last lot of worms I fed this season—and this made the best cocoons I ever had. I reel my cocoons on a new reel, invented by myself, which is pronounced better than the Piedmontese reel by all that have seen it.

3d. I have not fed any in an open shed or tent, and in my opinion it is folly to commence that mode of feeding in this section of the country, because in general it will be too cold in the night, and that will bring disease among the worms in the last age, about spinning time. My first lot this season was a total failure—the frost in June, as I think, spoiled the leaf. The second lot was as healthy worms as I ever saw; and on the first day they commenced spinning, they went up by thousands. The next day we had a cold rain, and the thermometer fell to 66°, and did not rise above 72° for five days; and then the worms were crawling about on the shelves, and a great many turned yellow, and others became yellow till they died;—and those that did spin made poor and thin cocoons. My last lot this season was small, but healthy—and in the last age I regulated the temperature by fire, in a stove with stone coal, and I never had better cocoons, except one small lot last year—and then it happened that the weather was fair in the last age, and the temperature regularly above 75°;—and all the rest I fed were equally as healthy, but it always happened that in spinning time we had rain and damp weather, and the temperature below 70° through the night; and therefore it is my opinion, that a silk culturist must provide a building where he can regulate the temperature and keep it regular, and above 75° in the last age.

4th. I feed two varieties of worms, which are with us called the small peanut, and the large peanut. It appears to me that the large is the healthier worm, but I prefer the small peanut, because that kind gives from 20 to 22 ounces of silk per bushel cocoons, and large only 16 to 18 ounces per bushel; and it appears to me that the large kind consume as much leaf to raise a bushel cocoons as the small will require, and give four ounces more silk.

5th. I use the multicaulis—planted 3½ acres, in the same manner that corn is planted, two years last spring, and they grow finely. I keep the grass out by working between the rows several times through the summer, with a cultivator.

6th. Among my acquaintances engaged in the business, there is much complaint that they can raise the worms and keep them healthy until a few days before spinning; then they turn yellow and die—and that they can't find out the cause of that; even if they clean the shelves every day, it matters nothing, they will die. My experience in the business is limited, but I believe the cause is the irregular temperature in the cocoonery in the last age; but I hope some older culturist will explain that subject in the convention, for the information of the young beginners. I wish good success to the convention—hope they will bring much useful knowledge of the business among the silk growers.

N. B.—Please excuse me for undertaking to write to you, being such a poor English scholar; but it is my wish, good success to the business. I am inventing a cheap machine for making sewing silk. I have tried it, and it appears it will work, and make as good sewing silk as any other, and will not cost much; so that any small silk culturist can get one, and make his own sewing silk.

CALEB PALMER, *Le Roy, N. Y.*—(1.) I have fed two years—first year, 1½ bushels; second year, 2½.

(2.) Use a common room, temperature not regulated.

(3.) Never fed in a shed or tent.

(5.) Multicaulis—let them stand and cultivate them.

(6.) Prefer early feeding.

RYLAND E. JONES, *Le Roy, N. Y.*—(1.) I have fed two years—first year, 3 bushels of good cocoons; second year, 1½.

(2.) Use a room in the attic—temperature not regulated.

(3.) Never fed in a shed or tent.

(4.) The two-crop worm.

(5.) Multicaulis and white—let them stand out, and cultivate them.

(6.) Early feeding, about June.

Nicholas McCarty, *Indianapolis, Indiana.*—I have fed worms two seasons. Last year, from 1¼ ounces of Piedmontese eggs, had 8½ bushels good cocoons. Same year sent to New-Jersey for 10 ounces eggs—hatched and hatching when they arrived, and lost the most of them. From the Piedmontese saved 50 ounces—placed them in ice at the proper time. In the spring, without my knowledge, they were removed—got somehow out of the ice, upon the surface, and the first I knew, they were all hatched in the ice-house. (I must be censured for great carelessness.) Took my worms, June 15, and to make a short story of a bad case, made only 14½ bushels of indifferent cocoons—not twenty as good as first crop last year.

(2.) The second floor of a two story house was used to feed in. The temperature not regulated, but a free circulation of air from the windows.

[No common dwelling-house has windows enough by one-half, if the rooms are filled with worms, as is usual.—J. R. B.]

(3.) Have not fed in a tent or open shed. A neighbor has fed in that way this year, and is highly pleased with it.

(4.) My experience is limited—am not acquainted with different kinds of worms.

(5.) Fed on multicaulis, of the second year's growth—cut leaves for a time, and then fed on branches. Cultivate the trees—trees not essentially injured in the winter, except where the water stood—head them down in the spring.

The production of silk in this country is of the utmost importance; and from what little I have done and seen, and from what I have read, I entertain no doubt in regard to the feasibility of the matter. *We can do it.* Let practical information be disseminated extensively, and it will be done. Hence I look with great interest for the report of the convention.

[Friend McC., take some one writer, the best here given, and follow his footsteps carefully, and you will go triumphantly through.
J. R. B.]

John L. Richmond, *Indianapolis, Indiana.*—I have fed worms eight years, on a small scale—have fed on wild mulberry most, Italian and some multicaulis, two years. Have found them to live best on wild, but grow slower. They died most on multicaulis, other circumstances being equal. Have used tight and open rooms, warm and cold rooms, and now prefer open tents or buildings, so as to let them have a free circulation of air. We fed them this year under an open shed, which even leaked so that my worms got wet in two showers, and it did them little or no harm.

I have tried various frames (all that I have seen described.) One of my own I like best, which is so constructed that I let down all my shelves to about four feet height, to feed and cleanse, then raise them up out of the way. I think worms may be fed until second moulting on multicaulis, after which they feed safer on the Italian, or even the wild, they being less succulent. The wild, I am confident, makes the largest cocoons, but I think a coarser fibre. I concur in the suggestions made by McCarthy, in the above.

DEWY COLLINS, *Le Roy, N. Y.*—In answer to the questions proposed, I would say:

(1.) I have fed four years with good success—first year 1½ bushels cocoons; second year 14½ bushels; third year 5½; and fourth 1 bushel, bad success.

(2.) Common room in a dwelling house—temperature not regulated.

(3.) Have never fed in a shed or tent.

(4.) The two-crop worm.

(5.) Multicaulis—cultivate by letting them stand out winters, and hoeing them.

(6.) I prefer early feeding—choose to hatch by the 20th of June.

ELIPHALET MURDOCK, *Le Roy, N. Y.*—I have fed worms—

(1.) Four years, as follows: first year 4½ bushels cocoons—second year no success—third year 5 bushels—fourth year 10 bushels.

(2.) Common room in a house.

(3.) No.

(4.) Two-crop and the peanut variety.

(5.) Multicaulis.

Rev. S. C. BRADFORD, *Sunderland, Mass.*—I have had some experience in feeding worms for five or six years. My first efforts, made in the usual ways, convinced me that results must be unfavorable, unless better methods could be devised, labor saved, and the health of the worm better promoted. I accordingly set myself to the task of studying the nature of the thing, and came speedily to the same conclusions with Mr. Gill, of Ohio, yourself, and others, in regard to ventilation. The method I adopted was feeding on open work, or racks, with limbs loosely arranged, to procure all the circulation of air that could be procured consistently with shielding them from the sun. To save further labor, I never applied a hand to the removal of litter, unless I found it souring or moulding, in which case I applied one hand to raise the brush on which the worms lay, and the other to pull out the affected litter, and apply a handful of slaked lime, hard salt, or plaster of Paris. They wind up in the same. I find the result as stated by Mr. Gill. The artificial modes of circulation mentioned by him I have not applied, but doubt not the utility of them.

I adopt the early and natural season of hatching and feeding, from eggs lying up in a cool situation during the season. I do not choose to remove them at all from the stand on which they were first deposited by the miller. Nature provides ordinarily for the simultaneous re-production of the insect and the food which nourishes it. The first feeding also I supply from thick sown nurseries of the minor sorts of trees, as whites, Asiatics, &c., by plucking indiscriminately the first shoots that start in the spring, reserving the larger trees and heavier foilage for the advancing stages of the worm; advancing gradually through all the stages from shoots of an inch to three or four feet, as the case may be. I find the shoots as favorable to the small as the large worm, and far less care and labor need be applied in the moulting than is necessary on leaves alone. Indeed I pay little regard to the moulting, except to take that occasion to spread them, at the same time to afford them by that means more air.

A little now on the subject of my success, must close my communication. My first success on the principles above stated, was decidedly favorable. The first crop, which was obtained in 1841, between the planting of my corn and the commencement of my haying, from some few ounces of eggs (I was not particular, as I am not in the habit of weighing), brought me, in reeled silk, together with the bounty on cocoons and reeling, the sum of *one hundred and twenty dollars* in cash, after making liberal provisions for eggs, by applying at least two bushels of my best cocoons to the purpose. Now for the labor in the production of the crop and the silk, I can give you but a general idea, which farmers, however, like myself, if such there be, made up of mixed professions, and broken constitutions, can somewhat appreciate. But to be brief, having taken possession of a farm of a hundred acres, with a wife and children, a daughter of fourteen and son of twelve years, all of us rather slender in physical power, and late in April, with no fuel for the season at the door, we prepared the land for crops, with all the necessary repairs of fences, &c., with manuring, sowing, and planting something like ten acres of English grain, corn, potatoes, and mulberries, and took care of the same mostly ourselves, with the exception only of some ten or twelve days' labor of a neighboring boy. Myself and son made the cocoons, my wife and daughter picked, and cured, and flossed them, with some help from an aged mother, who was on a visit with us, and the assistance of two days' work at picking from a neighboring woman. My daughter reeled them, as her first effort on a reel, &c., costing about six dollars. On a rough estimate, I considered my profits on the labor of the whole to be one hundred per cent. My success last year was not as good, owing to late frosts in the spring. This threw all my operations into the *last* of the season. Then by very *close cutting* my trees, I injured them for this year. This, together with another untimely frost, made me very late again this year, and the results, as they generally are in late feeding, not the best. Hereafter I will feed early, or not at all.

P. S.—I must just add, that I have the confidence to enlarge my silk business, believing that once a year's early feeding and cropping, will be found as profitable to the farmer as any other part of his business, and not diminish the amount of his foliage from year to year.

EBENEZER WOOD, *Jefferson*, *Ashtabula Co.*, *Ohio*.—I have fed worms for five years. Commenced with a few hundred with no experience, no knowledge but reading—gradually learning and increasing a little, till we have fed about fifty thousand. Made many mistakes at first, both in feeding and reeling, but think we can manage the whole business now as well as any farm crop. First year made a few good cocoons, but lost the silk—bad reeling. Second year made some good cocoons—reeled badly on a common reel—made into sewing silk—sold for $7. Third year made what we sold for $20—a good article. Fourth year did a little more. Last or fifth year made 7½ lbs. reeled silk. Said by judges to be a very good article.

Fed in an *out-building*, well-ventilated, used no fire, but think the rooms should be warmed in cold mornings or days. Some of my children put a few worms on the mulberries out in the field—about ten days after this called me to see how they had grown. I was *astonished* to see the difference between them and those in the building. I immediately put out some more; they did well for a few days, till the birds took them. They were certainly *three times* as large. We feed leaves, wet or dry, according to circumstances. I think it does not harm the worms to eat wet leaves, but it may sicken them to be fed with wet leaves in a long spell of wet weather. To explain myself—It is well known that a rich country, abounding in vegetable matter in a state of decay, generates poisonous gases, and of course poisons the atmosphere and causes sickness. Wet leaves fed for a length of time in damp weather, mixed with the excrement of the worms, moulder and produce, with the breath of the worms (which I presume is carbonic acid), a sickly atmosphere. The rooms not being well ventilated at such times, causes death among the worms. But fed when the litter dries immediately, and the room well ventilated, I have no doubt are as healthy as when fed dry. [Every way so. J. R. B.] In hot dry weather we wet our leaves to keep them from wilting and drying up, and feed them wet of course. I have given this hint about wet leaves, for I think it is a matter that should be understood.

I cannot say much about the different kinds of silk-worms, having fed only sulphur variety. Fed from the multicaulis mulberry. Ventilate and keep them clean. Think they have passed the meridian of life at three or four years old, and will have to be replaced with new ones. I know nothing about any other variety, not having used any.

Have fed neither early nor late. I will here just remark, that from what experience we have had, I have no doubt that with good eggs, worms well fed, well ventilated and well limed, we may be as sure of a good crop of cocoons, as we are of any good farm crop well managed.

It is not to be expected that all will succeed equally well; that is not the case in any business. There are many causes of failure. Some will succeed, some will not. But I see I am giving opinion and not facts, and I close.

P. S. What I have done is merely an experiment to see if the thing is practicable—am well convinced it will be profitable to those who manage rightly.

I have for several years read every thing I could get on the silk business, and picked up all the information I could get elsewhere. I mention this that you may see I shall look with much anxiety for your report—intend, if received, it shall do not only me, but others good. [Right, friend, lend it. J. R. B.]

Simeon Pierson, *Le Roy, N. Y.*—It is thirty-seven years since I came into this country, where I soon found the native mulberry growing spontaneously, which led me to believe, as I now do, that silk-worms may be grown in any clime where the mulberry grows naturally; but the want of eggs prevented my making any experiment with them till about 9 years ago. I then obtained some eggs of the mammoth sulphur kind; about the same time I obtained some of the white Italian mulberry trees, the seed of which was from Middletown, Conn., (and I think somewhat different and superior in quality to many now growing in this vicinity;) and previous to their growth I fed worms from the native mulberry; and after my white mulberry trees were grown I fed on both. And 5 or 6 years ago the multicaulis was introduced in town, but I have not been able to this time to discover that the worms manifest any preference, or show any partiality, to any one kind. My wife and daughter, for amusement and experiment, have fed a few thousand about every year since we obtained the eggs. By information and observation, we have been led to believe that the mammoth sulphur are less liable to disease than most of the other kinds, although we have not tested them, having fed the six weeks Nankin peanut. We have manufactured considerable sewing silk, some of which we have dyed different colors, which for strength and lustre would not suffer in comparison with the imported. We have never fed but one crop in a season; we have generally commenced feeding about the 20th of June, in an upper chamber, a tight room. After learning more of their customs and habits, we have fed them in our wood-house chamber, where there was more air, and where we found they did equally as well. We found they would retire from the light of a window even in a cloudy day. We have never used any artificial heat. I believe a succession of crops may be fed during the season, by commencing, say, about the 20th of May, and close 20th of September. The cause of failure in a crop in many cases, I think may be attributed to the want of care and attention in feeding during a cold storm, and frequently from the want of a supply of foliage just before they wind. Another cause, I think, may be attributed to the eggs having been obtained from a sickly stock; although we have never lost a crop from any cause, but I know of some who have.

I have never tried an experiment with the leaves or young shoots by dew-rotting or otherwise, to ascertain whether paper or any silk abric might be manufactured from them; but I think philosophy eaches that something may be made from one or both, by some simple process yet to be discovered, if not already.

N. B. Being too old and feeble to attend the convention, I have yielded to the request of several gentlemen by writing as I have.

JOSEPH STEER, *Mt. Pleasant, Jefferson Co., Ohio.*—Uses the shed and cradle—says he has produced his cocoons at less than one-half the expense of former modes of feeding—has made in this way this year upwards of 40 bushels of first rate peanuts.

JNO. K. NORTON, *Bonn, Salem P. O., Ohio.*—Writing to find a sale for cocoons, says that there have been about one hundred bushels raised in his neighborhood the present season.

J. LINTON, *P. M., East Bethlehem, Washington Co., Penn.*—Has fed 10 to 12 bushels—uses the white Italian, and multicaulis—wants market for cocoons—a trouble in many other places.

JOHN BOYDEN, *Brooklyn, Cuyahoga County, Ohio.*—I am a silk grower on a small scale, connected with other farming, and will endeavor to answer the several questions proposed. 1st. Have fed worms for 8 years, the first four years by way of experiment; since that, on a larger scale. We have been successful every year excepting the first, which was a total failure. 2d. Our building is nothing more than a common barn, with the cracks lined with thin boards; the temperature is regulated by stoves. 3d. Never fed in an open shed or tent. 4th. We prefer the peanut variety to any other we are acquainted with. 5th. We use the multicaulis, planted in drills, cultivated and kept clear of weeds. 6th. Early feeding is preferable to late, though we often feed as late as the 10th of September with good success. 7th. The cause of bad success in feeding is, I believe, in not proper ventilating, and inattention in feeding and cleaning. 8th. Cannot answer this question, it being out of my line of business. 9th. Have not tried the process of dew or water rotting, but will try it this season, and communicate next.

In conclusion I would remark, that I feel no desire at present to discontinue growing silk; it is certainly a profitable branch of business to me. The avails of my silk operations are about equal to those of the farm. It makes employment for my whole family.

I will now state my manner of feeding and treatment of the worm. We hatch them as early in the season as will answer, and feed them on the tender leaves till they have moulted the 2d or 3d time, when we commence feeding with branches; that is, we cut the trees down to the ground—the trees having been cut to the ground the previous spring—then take them into a common straw-cutter, and cut them three or four inches long, branches, leaves and all. These we feed to the worms. Trees *can* be cut twice in the season, but once is about sufficient for the health of the tree. I should recommend after the first cutting, to pick the leaves the rest of the season. Two crops of worms can be raised with ease, and I have raised five. We have no feeding frames or hurdles; we feed on the board shelf, and shift our worms by means of branches.

I likewise consider the silk crop a *sure* crop: in eight years I have failed but *once*, and that was easily accounted for—inexperience in feeding. Keep your shelves well cleansed, the cocoonery well regulated as to heat and air, and plenty of fresh foliage on them, and I can safely say a failure will not often occur.

SILAS C. CLARK, *Sharpsburgh*, *Alleghany county*, *Pa.*—My experience in the silk business commenced the present season. The mulberries at my command consisted of about two and a half acres of multicaulis, standing one and two feet apart, in rows about four feet apart, growing from roots and cuttings, planted in the spring of 1842. The tops, which had grown from five to seven feet high during the season, were cut off near the ground, a portion last autumn, the remainder in the spring, excepting a few for experiment. The foilage of the present season was therefore derived almost exclusively from shoots of this summer's growth, which I may here remark proved much the more prolific. The lot of eggs designed for successive crops of worms during the summer had been deposited in an ice-house for preservation. On opening the box containing the eggs, on the 17th of June, in order to expose a portion of them, the whole were found to have hatched, and the little worms, apparently a day or two old, were generally in a state of great activity. The box had been accidentally placed above and a little remote from the ice. Hence the misfortune. However, I immediately commenced feeding, and selected as many worms as I supposed I should be able to provide with foliage. For a cocoonery I occupied an *open building*, in which there was a free circulation of air, corresponding and varying with the surrounding atmosphere. No artificial heat was used, and no effort was made to regulate the state of the temperature, which ranged from 56 to 92 degrees.

The variety of worms was the common peanut. In the result I have little of which to boast, although nearly meeting my expectations. That the manner of hatching engendered disease among a portion of the worms can hardly be doubted. Still, but a comparatively small number of the worms was sickly, and a yield of about 60 pounds of cocoons to an ounce of eggs was realised. However, another loss chargeable to inexperience was subsequently sustained, through an unsuccessful attempt to stifle the chrysalis by the use of camphor. The eggs for the next crop—of a species called, I think, the Canton peanut

—were procured in Northampton, Mass. These hatched on the way; and for the want of mulberry leaves the worms were fed a day or two on lettuce. Subsequently they were tended and treated in the same manner as the previous crop. During their fourth and fifth ages, a large portion of them became diseased with the yellows; and this effort proved almost a total failure. The very few worms, however, which came to maturity produced cocoons of an excellent quality. With an ardor stimulated by an unabated solicitude for the character of the business, I resolved on making another experiment, which may justly be considered my only fair trial, and the only one entitled to influence in determining on the practicability and future prospects of the enterprise.

I procured an ounce and a half of eggs of the common peanut variety, and commenced feeding on the 15th of August. By means of artificial heat in my open building, I strove to keep the temperature of the cocoonery above 68 degrees; in several instances, however, without success. Several times the thermometer fell down to 60. I fed regularly seven or eight times per day, once in from two to three hours, and never permitting more than five or six hours at most to elapse between feedings, even during the night. Through the first four ages the worms were fed with cut leaves, subsequently with branches.

With the assistance of my lady I did the whole work of the cocoonery and everything appertaining to the feeding, excepting only the gathering of leaves after the third moulting, the expense of which amounted to about five dollars. In twenty-four days from the first hatching the worms began to form their cocoons. At this juncture the weather, which had been very favorable, became suddenly cold, so much so, that I was unable to keep the temperature much above 60, in parts of the cocoonery remote from the stove, without doing injury to the worms in closer proximity. The cold state of the temperature at this critical period, in my opinion, not only retarded the progress of their spinning, but, in a greater or less degree, tended to diminish the amount and value of their products. This, however, is only my own individual opinion, of which I should not be very tenacious against the longer and more accurate experiments of others. However, in this instance, the worms kept near the stove in a high and more uniform temperature evidently produced the larger and better cocoons. Still, very few worms were sickly, and the product of this crop of worms amounted to ten bushels, or 133 pounds of good cocoons.

The great haste in which I write compels me to close with a very few detached general remarks. I am constrained to believe that the unhealthfulness of the worms mentioned in the foregoing narrative is justly attributable to the manner of hatching and the want of experience in tending.

With good eggs and plenty of room, and other conveniences, I should now undertake to raise a healthy crop of worms with as much confidence of success as I should a corresponding number of any animals whatever. *Cleanliness* seems to me indispensable to the healthfulness of worms. I am also disposed to attach great importance to *regularity* of feeding, more even than to frequency. My present partialities, too, are decidedly favorable to a uniformity of temperature, with a good supply of ventilation—a temperature at least never below 70° and whenever practicable, ranging at about 76°, especially when the worms are moulting and spinning. The leaves of the mulberry trees before mentioned, have at no time during the season been exhausted; and I think with good tillage they would during the season have afforded sufficient foliage for at least 250,000 worms. One thought more : it is this. Whoever engages in this business without experience, and makes the necessary arrangements for a single season, with the expectation of making, during that time, a fortune, or even of gaining a full remuneration for his time and expenditures, will be likely to be disappointed. Still, if it be perseveringly and judiciously prosecuted, I entertain an unshaken and settled confidence in the ultimate and triumphant success of the silk business in this country. I cannot doubt that the business is destined shortly to become a great and important branch of national industry, and a vast and inexhaustible source of national wealth.

Pliny Safford, P. M., *Westminster*, *Vt.*—I have fed silk-worms in a very small way for two or three years past. I have a few mulberry trees, partly multicaulis and partly Alpine. I feed about two weeks on multicaulis leaves ; after which, or after the second moulting, I put them on the Alpine. My cocoonery is a part of my barn, which I use for a carriage-house. When the feeding season comes, I clear it out and put up shelves, on which I feed. My worms are what are called the six weeks sulphur. They feed about five weeks.

On the 27th of last May, I took some eggs from the ice-house and placed them in a cool room. They hatched June 21st, 22d, and 23d. The eggs that were left on the third day of hatching I put into the fire.

On the 4th day of August I took down 18 pounds of cocoons, which yielded one and a half pounds of reeled silk.

July 1st, I took some eggs from the ice, which came out on the 13th, 14th, and 15th. Sept. 1st, I picked 15 pounds of poor cocoons, which reeled half a pound of silk.

My first crops were healthy, but the second were sickly.

Roswell Rice, *Charlemont*, *Franklin Co.*, *Mass.*—We consider the silk business a noble one, therefore if we can, by sending in our statement, small though it be, yield any assistance or encouragement, we gladly do it. In answer to questions :—

1st. We have fed worms six seasons, and our labors each year have been crowned with success.

2d. Feed in a close building, regulate the temperature by artificial heat, the mercury standing at 75° or 80°.

3d. Have never fed in an open tent or shed. Did we live in a latitude where no chilly blasts were ever felt, but all were warm and pleasant as a sunny day in July, we might feed in tents; but we think the rigors of this, our northern clime, are too severe for the silk-worm to endure.

4th. We prefer above all other kinds, the *peanut* worm; consider the texture finer, and the yield greater.

5th. We use the multicaulis and white mulberry. The white in the early part of the season, before the others are grown. Cut the tops from the multicaulis trees in the fall, and leave the roots in the ground.

6th. Have fed both in the early and late part of the season, and our success in each is equally good.

7th. As to the causes of bad success in feeding, we know no need of having bad success. We always keep our room *warm*, feed as often as the worms will take leaves, and attend well to *cleanliness*; and by so doing, the worms are all in the bushes to wind in four weeks from the time of hatching. If this seems in any degree incredible, please *try it* and see.

8th. Have not tested the use of the mulberry leaf for paper, our means are small and inadequate.

9th. We have never tried to separate the bark from the young shoots, to convert it into paper or fabrics.

Our only crop this season amounted to 180 pounds of cocoons. I consider the silk business one well worthy the attention of our New-England farmers, and I believe it is one which will yield a much better profit than ordinary agricultural productions. To my brethren silk growers, I would say,—Onward!—be not easily discouraged. "Perseverance overcometh all difficulties."

FRANCIS D. WAIT, *Cantwell's Bridge*, *Delaware*.—I am a silk grower, and will proceed to answer the first series of your questions. I should be extremely happy had I funds to spare, to come on to your city, but am too poor—the fate I am afraid of many growers. I was induced in 1838, by representations made on every side, of the great profits resulting from the culture of silk, to enter upon it, and have fed worms every year from that time to this, in increasing quantities. The past season I raised nearly 600 pounds of cocoons.

In answer to the second question, I will state that in —38, I put up a building 25 by 28 feet—two stories high, and a good cellar, which is absolutely indispensable. I fed two or three years at the natural temperature; since then I have used artificial heat, I think to great advantage. I have a furnace in the cellar, from which heated air rises through the building, above, as well as below stairs. A gradually increased temperature is particularly necessary in hatching the eggs. In this way eggs may be hatched in two, and not exceedig three days, whereas, at the natural temperature, several days more will be required, and one year I recollect the eggs ceased hatching in consequence of a cold northeast storm, when a great reduction of temperature took place.

To the third question I have nothing to say. The last four years I have used only two varieties of worms—the sulphur and the peanut. The first year I raised some of the mammoth white and the two-crop, and rejected them both. With regard to the first two varieties, I have to state, that in 1842, when I first noted the difference, it took 4,400 peanut cocoons to make a bushel, and 2,200 of sulphur to make a bushel. From the first, I obtained 22 ounces of raw silk, and from the last, fourteen ounces of raw silk. The peanut cocoons per bushel, weighed 15 lbs., the sulphur per bushel, weighed 9½ lbs. It took about 300 peanuts to weigh a pound, and about 240 sulphur to weigh a pound. From these facts you perceive, that worm for worm, I obtained more silk from the sulphur than I did from the peanut. The 4,400 peanut cocoons yielded 22 ounces of raw silk, and the 4,400 sulphur, yielded 28 ounces of raw silk. The past season the cocoons were about in the same ratio. With regard to the product in silk, I cannot say, for I have not reeled them.

I use the multicaulis tree nearly altogether. I have a hedge of white mulberry trees, upon which I feed the worms during the first age, but very fine. The past season, as well as before; I cut down the trees, took them to the cellar, and there strip them when I feed with leaves, otherwise cut off the branches and feed with them, which is far preferable. In feeding with leaves I use the paper net, which is far superior to every other contrivance. Nearly all the worms will ascend through them the first feeding, so that you change them every day at farthest. Feeding on branches, however, is preferable on every account. Less expensive, less trouble, worms more healthy, and of course obtain more silk.

The experience of silk growers, so far as I have ascertained, is in favor of early feeding. I believe, however, that two good crops can be raised, particularly if you have artificial heat, which is more especially demanded at the beginning of the first crop. My first crop was hatched on the 23d and 24th of May, and consisted of 5 ounces of eggs, wound up in 32 days, obtained 413 lbs. of cocoons, ought to have had, and should have had 500 lbs. could I have have fed at 9 o'clock P. M., as I always had done, but was prevented for fear that my boys would set the straw which I used as a bed for the worms, on fire. On the 4th of July, on going to the ice-house to take out my eggs for the purpose of hatching, I found that they were already hatched, and some of them had been hatched several days; but in this unfavorable condition I took them out and fed them, and gathered 153 lbs. of cocoons. I received some eggs on the 17th of August, which had been left in an ice-house. On the 18th they began to hatch. I suppose that I had as many worms as I had at my second crop, but obtained only 10½ lbs. of cocoons. They nearly all died, still I had some as good cocoons as I ever had.

To the 7th question I reply that I am the only one feeding in this part of the country. To the 8th and 9th questions I have nothing to say.

I have generally obtained 100 lbs. of cocoons from an ounce of eggs.

I believe that 50 or 60 dollars may be had clear profit for every acre of mulberries.

I have on hand 30 or 40 lbs. of raw silk which I find great difficulty in disposing of. There is no market for it in Philadelphia that I know of. And to send it to New-York is uncertain and inconvenient.

Our State gives a bounty of two dollars on the pound of reeled silk—15 cents per pound on cocoons, which does not pay for raising them by one-fourth. I think 20 cts. per pound would pay the expense of raising them. I anticipate a great deal of pleasure in reading the proceedings of the convention, and hope the result will be auspicious to the growth and manufacture of silk in this country.

JOSEPH BENCHLEY, *Newport*, *Herkimer Co.*, *N. Y.*—I did not receive the Silk Circular till late in September, therefore could not test the uses of the leaf or bark of the mulberry as your Committee request. Before receiving it I had gathered and dried in the shade a quantity of leaves to sustain my worms in case of damage to my trees by frost, next May or June. I have never before tried the experiment, but have no doubt of the result as the leaf retains its color, and when moistened, its taste. I have fed silk worms six years, generally in small numbers; one year I fed in Ohio 200,000, but failed for want of leaves; we had but 15 bushels cocoons through their 4th age; they were poorly fed on the leaves of the red mulberry gathered from the woods. This is the first year I have fed wholly from the multicaulis My cocoons did better than the same kind did last year, fed on white mulberry. Name of the worm, Mirable Jaune, Nankin color, and Sina Mirable, white: the best success I ever had was with worms I got from Mr. Bean, of Philadelphia, a small peanut shaped cocoon. He called them Sina Nankin. This year my worms did not do as well as last; I hatched the middle of July, last year the latter part of June. I fed in chambers with no chance of ventilating to my mind, and about the time of winding in August, we had one week of very warm and very wet weather, with no air stirring, and one-half of my worms died. I have had very good success but once. Never had a cocoonery, but shall next year; this year fed one lot in an open shed; they did better than the others until the warm wet weather, they then shared the same fate. I think that would answer in June, when the nights are warm. I believe a cocoonery that can be thrown open or closely shut, with artificial heat, is indispensable for *late* feeding.

I have always manufactured my cocoons into sewing silk. I reel them myself, and my wife or hired girl twists and doubles and twists it on a common spinning wheel. I send you a few threads which are no better than all I make A lady of this place purchased of me silk for a pair of stockings; she took it to the stocking weaver of Utica, who pronounced it a superior article, as good as he ever saw, and he learned his trade in old England. The stockings were as handsome as I ever saw, and so said others. With the present State bounty, I think I could produce cocoons for sale at the prices offered at the State Prison at Auburn.

In the spring of 1842, I planted 2,000 multicaulis trees, which I brought from Ohio, in rows six feet apart, and trees two feet apart in the row. I then took limbs from the same and placed them so the ends touched, in drills the same distance apart, 6 feet. In the fall I had about ten thousand in all, on one and a half acres. I let them stand as they were, without any protection. I believe every tree sprouted last spring, and the 10th of June, the young shoots were killed to the old wood by frost. They recovered, grew rapidly, and have matured their wood nearly to the top, and are now shedding their leaves without frost. Many of them are six feet high. I know them to be as hardy as the white, and the finest cocoons I ever saw were produced by worms fed wholly on multicaulis, by Mr. Clapp, Dr. Matthews, and others, at Painesville, Ohio. If I could not account for my bad success I should be discouraged.

With a cocoonery in the midst of my trees, I believe I can attend two hundred thousand worms from the middle of May, to the middle of September, with children to pick and bring in the leaves.

When we see multicaulis trees from limbs planted in May, (of course do not strike root and begin to grow till June,) withstand such a winter as 1842–3, and this in the north of Herkimer Co., we may ask what part of our country cannot produce silk.

SAMUEL BARRETT, *French Creek, Lewis Co., Va.*—I have just received your Silk Circular. I perused it with a high degree of pleasure, having always been a warm advocate of the silk cause. Although my operations have been small, as you will perceive, I cheerfully contribute my mite to promote the great object you have in view. In answer to first question. "How long have you fed worms," &c., I will say, I have fed worms, or attempted to feed them for three years. June, 1841, I received by mail one ounce of eggs from Gideon B. Smith, of Baltimore, editor of the American Silk Journal. They were of the variety which he called the Mirable Jaunes, and which he pronounced the best kind. I fed in the loft of a log building, with only one window, and a door on the same side of the room. The room was otherwise tolerably tight. Underneath was a cooking-stove daily used in cooking for the family. This, together with the extremely warm weather, or some other cause, produced unhealthiness in the worms, and I lost the most of them. The close manner in which they were kept was sufficient, in my own mind, to account for this result. In 1842, I lost all my eggs in the spring, by the rats unluckily getting at them. I then got some of a neighbor who had kept them in a cellar till April The weather, for some time previous, had been extremely warm; wishing to retard their hatching, I put them into a deep well and kept them till July. I brought them out to hatch but they would not, they had been too far matured. I could get no more that season. The present year I could not obtain any eggs in the early part of the season, except a few which I obtained from Doct. Stebbins, Northampton, Mass.

I put them in a cool cellar after they had for some time been exposed to the warm air. They mostly died at the time they hatched. As I was very anxious to feed enough this year to obtain seed for next, at least, I wrote to G. B. Smith, of Baltimore, to send me a small quantity by mail if he had any; on the first of August, they arrived at Clarkesburg, a distance of 260 miles, in extreme warm weather. They had just commenced hatching when they arrived. They hatched out well and proved a healthy lot. Not a worm scarcely died till the fourth age, when a few of them died in consequence of a long spell of wet weather. On the whole they were a healthy lot and made me 36½ lbs. cocoons. They were of the Mirable Jaune variety, or a cross breed of the peanut, and some other valuable kind. My cocoonery was a building erected by putting forks in the ground—laying poles in these forks to support the roof, covering the roof with boards and slabs, and the sides with rough boards loosely nailed on. It was 20 by 16 feet. During feeding it was my object to keep a stream of *pure air* sweeping through the cocoonery, by opening all the windows and the doors. Besides this I knocked off several boards from my building, in different places, that the air might have a free circulation in every part. This I could perceive had a fine effect on the worms. I had a fire-place in one end of my building, and occasionally built a fire in damp weather. No other artificial heat was used, and this dld not have much effect, as the building was so open. My worms had two very long damp spells of weather to contend with, and at ages when they were the most liable to suffer —the one just at the fourth moulting, and the other just as they were about to wind. The only varieties of worms that I have fed, are the two-crop, and the peanut or Mirable Jaunes. The two crop were always very healthy, but the product of silk is too small to be an object to feed them.

I have principally fed on the Canton mulberry, with a few of the multicaulis, and the Italian. I once fed a small lot on each of the three kinds—the multicaulis, the Canton and Italian. The Canton and Italian produced the largest worms, but I found on weighing I had not given the same weight of leaves of the multicaulis as of the others. The lots were all equally healthy, and the worms had no preference for either. After the first year's growth from the cuttings or larger trees, I have let them run their chance through the winter. The tops have generally been killed with the frost, but the most of the roots have lived, except on *low, frosty* grounds, where a considerable number have died. The Canton tree, so far as my experience has extended, has proved more hardy than the multicaulis; the leaf is thicker and heavier, and they grow thicker on the stalk. On a given piece of ground I have thought the greatest weight of leaves could be obtained from the Canton. As to the difference between early and late feeding, I am not prepared to decide; I have succeeded best with those I fed in *August;* but the causes were probably in the *management*, and the difference in the eggs. There is one thing in favor of late feeding, in my estimation worthy of notice, especially where but one lot is fed through the season. The leaves are more fully matured, and the largest yield can be obtained.

One of my neighbors fed a lot of worms this season in June and

July. He hatched about two ounces of eggs, producing from 60 to 100,000 worms. He had not foliage enough to feed one-fourth of that number. His room for feeding was a small chamber in his dwelling-house, about 14 feet by 12, and not capable of containing more than 250 feet of shelving, which at the most ought not to contain over 10,000 worms. I advised him to throw away 7-8ths of his worms, and warned him of the consequence if he did not. Having fed a small lot last year with good success, and being one of those men who choose to have their own way, he determined to try his luck with the whole lot. He ransacked the neighborhood and the woods for leaves, but all in vain; at about two weeks old they became diseased, and he lost the whole lot. His eggs were good, and his worms perfectly healthy, till about the third age, when they became *suffocated.* I have found on close observation, that nothing imparts such vigor to the worms as a *good dry breeze of air.* Even a damp breeze is far better than a sultry confined air. The building in which I fed stands in a low, damp situation. I intend to build a cocoonery another season and locate it on a rising ground, where the air will circulate freely. In regard to the silk cause in general, I have always had confidence in its success. About four years ago, I laid out about $160 for cuttings to commence an orchard with. I lost the greatest share of them. Since that time, I have kept on increasing them, down to the present year. Some of my neighbors tell me I had better grub them up. I tell them no—they may yet want to *purchase* them of me for orchards of their own. Feeding worms has been no new thing with me. When I was a boy, my sisters, several in number, fed silk-worms from my recollection, my father having planted an orchard of Italian trees on his first settlement in Hampshire county, Mass. Several brothers of us used to pick leaves for our sisters. They always had success. I never heard of their crop being unhealthy, or losing it. They thought it no more difficult to raise a crop of worms, than a crop of chickens.

NOAH B. HART, *Batavia, N. Y.*, for himself and *Elijah Herrick*, Bethany; *Worden Mattison*, Darien; and *Wm. Telden*, Le Roy, says:—

At the State Fair at Rochester, we had a hurried convention of a part of the silk growers present, and sent you some statements of our successes. [I am sorry to say that the document here referred to has not been received. J. R. B.] There were fine specimens of silk exhibited on that occasion.

I am authorized to say, that amidst our successes and losses, our good moves and bad moves, we are all determined to persevere, fully satisfied that the silk business has a solid basis to stand upon, and all that is wanting to secure full success in feeding worms, is practical knowledge, and appropriate facilities,—the same precisely as in anything and everything else.

We have mostly fed in our dwelling-houses and out-houses, and generally on the multicaulis.

I send you a sample of the raw silk that took the premium at the Fair at Rochester, and also a sample of sewing silk made since the Fair from some of the premium silk. [This raw silk is a superb article. J. R. B.] We have had a great deal to contend with, in our efforts in this business:—want of experience, wrong information, prejudice and ridicule from the unbelieving multitude, whose business it is to laugh at what they have not themselves the energy to attempt. But the tables are now turned and turning, and we are animated to see the manifestations of the change, here as well as elsewhere.

REV. JOSEPH FIELD, *Charlemont*, *Mass.*—My experience in raising silk commenced in 1833. For a number of years my worms were fed in rooms not adapted to good ventilation, nor for being artificially warmed. Small crops were ordinarily obtained with various degrees of success. Sometimes they were not shut out from the free access of external air without any means of modifying it in regard to temperature. Five or six years since, I erected a cocoonery 40 feet by 22, a story from the ground, extending north and south, three windows on the east side, and as many on the west directly opposite, and two with a door in the north end, a door at the other end opening into another apartment somewhat open and capable of being filled with breezes from the west. In this room prepared with shelves running from one end to the other, and the walls made tight by plaster, my worms have been reared, for several years, with little use of artificial heat. My daughters who had the care of feeding the worms, became convinced by a gradually increased use of the stove, that such an article was very important in an expeditious and successful raising of cocoons. Accordingly, the present year, we introduced a stove, by which any degree of temperature could be raised and maintained, and care was taken to keep it up as high as eighty, and not unfrequently rising to a hundred. The effect of it upon the worms was evidently most salutary. They were always lively and in an eating mood. Their growth was rapid and unobstructed, and in four weeks at most their shelves were beautifully decorated with their cocoons. Never before did they appear so large and healthy at the end of their several ages. At the winding period, however, a portion of them died, in consequence, it is supposed, of not being so promptly and fully fed, and supplied with eligible materials for the reception of their cocoons as was requisite. The heat of the room brought them forward so fast, that the hands employed could not supply all their wants as quickly as their well-being required; for they evidently love despatch as well as those who tend upon them. The experience of the season seems to us to warrant the conclusion, that it is not excessive heat that injures the worm in any case, while cold is not a little injurious by checking activity and leading to a lingering death. Those worms which occupied the hottest part of the cocoonery did the best in our crop. Sweet, pure air is necessary, and must be obtained by ventilation if necessary; but dryness and heat are manifestly the most efficient means of securing healthiness, speedy growth, and desirable fruitfulness to the silk-worm. It is often necessary to elevate, but never to depress the temperature, while all impurities are carefully excluded from the atmosphere.

FRANCIS MOOR, *Putney*, *Vt.*, says,—I commenced growing silk as a business several years since, having a slender constitution and poor health. The tree speculation came. To better my circumstances, I engaged in it, and lost what little I had. Still I have kept doing something at growing silk; have about three acres of trees, multicaulis, Cantons, Asiatics and Alpines. I have fed early and late, used the different kinds of worms, and kept eggs in all the different ways, and fed in close and open buildings. I prefer early feeding, though sometimes make good crops late. As a system for general adoption, open feeding is safest. Trees ought not to be so thick as to prevent the sun from reaching the leaves, and the air to circulate *freely* among them. In 1840, I made 121 lbs., 5 oz.; 1841, 494 lbs.; 1842, 161 lbs., 4 oz.; 1843, 108 lbs., 5 oz.

MOSES E. GUILD, *South Dedham*, *Mass.*—I received your Silk Circular per mail, dated August 28, and am exceedingly happy to learn that measures are to be taken in behalf of this important branch of agriculture. It not being possible for me to attend the convention, will communicate by mail what little information I may be master of.

Have fed worms two years, the results have been unfavorable owing to inexperience. This year lost most of my worms by *over-stocking* my trees. Fed in a perfectly open building, giving the worms a thorough ventilation in all sorts of weather. They did extraordinarily well until my foliage failed. I prefer the large sulphur and peanut worms. Use the multicaulis, Broosa and Alpine; raised them from the slip; have paid no particular attention to them otherwise than hoeing. Winter kills the tops of the multicaulis, but they sprout from the roots readily in the spring.

Feed on bundles and cut the branches, it being much more expeditious than plucking the leaves, and seems to be more in accordance with the nature of the worms, as they invariably (when healthy,) after eating, crawl to the stock of the branch to rest. Prefer early feeding for a number of reasons: 1st. It is natural for the worms to hatch in June. 2d. The weather and temperature in general is fine, and more conducive to the health of the worm. 3d. The second crop of leaves (which generally constitutes the chief part of the fodder for the last feeding,) have not those good qualities requisite for the prosperity of the worm, that are possessed by the first growth of leaves. The cause of bad success in feeding, which has come under my observation among my acquaintances, is simply this: It being associated with everything else on farms, the attention which the business demands is grossly neglected; therefore the results (like everything else in the agricultural way, which has not its due share of care,) are unfavorable. And in *my opinion*, the business, that is, the growing part, will never arrive to a state of perfection, or yield the grower a handsome equivalent, until he gives his whole attention in the growing season.

W. J. CANTELO, *Weehawken Hill*, *Hoboken P. O.*, *N. J.*—Dear sir: The following is a brief account of my process of raising silkworms. I had this year from 5 to 6 ounces of eggs. I divided them in three parts; the 1st commenced hatching the 7th June; the 2d on the 13th; the 3d on the 20th. We fed them on the morus multicaulis of my own raising, for nearly three weeks, when my own trees, having planted them this spring, and not wishing to injure their growth, I had resource to trees in the neighborhood, the leaves of which were very poor, the soil being not good, and not suitably cultivated. I found that at the 2d moulting, the 3d hatch were as far advanced as the 2d, and they wound at the same time; which I attribute to the last hatch having had a steady heat from the time of their leaving the shell, whereas the second lot had several very cold days. An able writer on the subject has remarked, and my own experience confirms it, that if exposed to a high degree of heat during the first stages, they receive an impetus that continues during their brief existence. The last of the worms wound the first week in August. We were disappointed in a part of the leaves we had engaged, and were again obliged to change their food; the only leaves we could procure at the time were grown on the edge of a marsh and very much in the shade, and were in consequence poor, and watery, and all the worms that were near winding, which is their most critical age, were immediately affected by them with a disease resembling *cholera morbus* and almost all died; a few that were probably the strongest, recovered by being fed with leaves well dried in the sun; they formed cocoons, but they were very indifferent. I estimate my loss at 30,000. I mention this circumstance as a caution to persons feeding, not to change a strong leaf for a softer or more watery one, *after* the last moulting. Notwithstanding the disadvantages I labored under, I obtained from the 5 ounces of eggs, 45 bushels of cocoons in the gross. We have tried the various methods of stifling the chrysalis. Carbonic acid gas, camphor steaming, and baking, but find nothing equal to destroying them by the heat of the sun. During the feeding the thermometer fell once to 64, and one day rose to 100°, but it ranged from 76 to 86°. Our feeding frames were lath hurdles, 4 feet by 9, in tiers of 5, one above another, pulling out on either side like drawers, into a three feet alley way.

For the winding I tried the branches of various trees and shrubs, both with and without leaves; those without leaves were decidedly preferable, but each had its disadvantage. From close observation of the worm in its choice of a place to wind, the idea of the rack exhibited at the fair struck me as being suitable, and on trying it I found it to equal my most sanguine expectations. * * * * It may be seen that I do not recommend these racks from interested motives, as the model has been sent to the Institute, for the benefit of the silk growing community; I should merely wish the privilege of naming them *Cantelo's Winding Rack.* The silk exhibited is part of this year's crop, and is reeled by my daughters on what is called the Piedmont reel, with some improvements. Relative to the cost of raising, my expenses this year were,

For 9,000 lbs. of leaves,	$30 00
Expense of picking at 31 cents per 100 lbs.,	28 12½
	$58 12½

I cannot state the expense of attendance for feeding, as the worms were attended by my three daughters during the feeding, winding, and gathering, with the addition of an extra person after the last moulting. Knowing the number of persons required to attend 5 ounces, any person can easily estimate what that part of the expense would be.

I have every confidence in the silk raising eventually becoming profitable; under that impression I have planted 20,000 trees, built a cocoonery 200 by 25, two stories high, well ventilated by doors and windows. I would suggest to those interested in promoting the silk raising in this country, the necessity of encouraging the farmers in their neighborhood who have only the means of raising a small quantity, by giving them slips of mulberries to plant out, and giving them annually the best of seed carefully raised and selected, with the promise of buying the cocoons from them if thay have managed them properly. The reeler would be fully repaid by the good cocoons he would then be able to purchase. It is well known that in Italy the large filatures are principally supplied by the farmers in the vicinity, who raise more or less according to their house room, buying the leaves from the landed proprietors, or giving them half the profit. To conclude I would wish to make a few remarks on the difference of opinion which exists in respect to feeding with wet leaves, or allowing the worms to be exposed to wet or rain. It appears to me wrong in theory; it has been observed that we should follow nature as closely as possible; that is certainly reasonable, but it must be the nature of the silk-worm, which has been brought originally from a very hot climate, where they have no rain during the summer season. It is therefore not natural to that insect to be exposed to wet, or to eat wet food. As well might we take delicate exotics, and instead of housing them and giving them as near their natural regular climate as possible, expose them to the hard frosts and blighting rains, and expect them to live. All this is but theory. Experience must test the question.

JOHN BARRETT, *Ashby, Mass.*—Took up most of his trees last fall, and has been rather unfortunate; many of them died, others were injured. Has fed but few worms this season; has now about three acres set with trees, and intends to go on with the business, as he feels confident it will afford him a good return for his labor.

As to the questions, I can answer but a few, because I have kept no statistics that are now at hand.

1. Have fed worms, more or less, eight or ten years. The general result has been satisfactory, though in some of the cold seasons did not do so well.

2. I use an unfinished room in my house, which is finished outside, temperature regulated some seasons by a stove, and others by the winds and the sun, but always when I have used artificial heat have succeeded the best.

4. The name of the variety that I have I do not know; it is a large kind of worm; have had others, but prefer this to any I have seen.

5. My trees are chiefly Cantons, and a few common whites. I find the better they are cultivated, the better for the grower, the better for the picker, for the feeder, and the worm.

6. I prefer early feeding.

We have manufactured all the silk we have raised into sewings. My wife and a little girl of 14 have done the work principally. I turn in a helping hand whenever I can. The amount of proceeds varies from $20 to $100 in a season, just as I am able to give my attention to it; have from 6 to 8,000 trees, and mean to enlarge my plantation.

I see nothing now to prevent this branch of business becoming equal to any other in this country, if it is properly managed. I will just mention one little incident which occurred to me some six or seven years ago, in regard to eggs. When the millers came out, they were placed in a box, and set on a work-bench in the room where they had been reared. Some of the roguish ones took a notion to slip from their prison, and laid their eggs on the bench, unobserved and unmolested. The next May, just at the time when the mulberry began to show the leaf; my wife went into the room for some dried apples, which she had put into a bag, and laid on the same bench; and to her surprise, found it covered with worms. She called to me, and wished to know what they were. I told her they were silkworms. There they had lain and been frozen as hard as rocks all winter, and come out bright and early in the spring. I fed them, and they did as well as any I had that season. Since then I have had eggs frozen a number of times, and with the same results.

JOHN MAXAM, *Colerain, Mass.*—We have fed all our mulberry leaves to worms this season, with good success. The silk-worm's cradle of Mr. Gill is worthy of notice. A few days prior to receiving your favor, describing the cradle, for the want of room I had suspended a rack, made by framing narrow strips of boards together, ten by three feet, by cords, which I could let down and feed, then raise and pass under. I attached a thin board to the under side, fed with brush, when a sufficient quantity had been laid on to prevent the worms from falling through, took off the board, taking care not to swing the rack more than we could help. But upon receiving a description of Gill's patent, I let down the rack and set it in motion It swings nice, to the amusement of my neighbors, and to the great comfort and joy of the little beings on the brush. I am satisfied the cradle will do well, yet doubt the propriety of feeding in tents. My worms do not eat well in wet, cold, and long storms; do the best in dry, warm weather, with pure air. In damp, foggy weather, I use the stove, by which means the worms will eat double the amount of leaves. Worms want a warm, dry, pure air; still, tent feeding remains to be tested in this climate.

I have fed worms five seasons; use the multicaulis; have one-third of an acre, now three years old; head them down in the spring; trees not injured by standing out winters; have never failed *essentially* in any part of the business, but have yet much to learn.

H. A. Young, *Silk dyer*, *Detroit*, *Michigan*.—I forward you the little knowledge I have respecting silk raising in this State. I tried the experiment three years ago; fed the worms with the white mulberry, and met my expectations. There are some ten or twelve families of my acquaintance who have this season raised several bushels cocoons, from the morus multicaulis, and other varieties, and from what I can learn, it would become a source of wealth, if extensively engaged in; and to secure this, all that is wanted is a convenient market. There are three silk weavers in this vicinity; they do nothing at it, for want of encouragement. I have seen a sample of this season's reeled silk; one of the above mentioned weavers pronounced it *a first rate article*; many fail in cleaning silk. All agree that it is stout, but deficient in lustre. Here lies the mystery. Most people clean the silk with soft soap; destroying the native gloss, in freeing it of its gum, owing to the vegetable alkali the soap contains, the silk being animal substance; it will completely dissolve wool, if applied strong enough, forming a soap of itself. Many dyers use nothing but the best of white soap; being made from mineral alkali, soda acts gently on animal substances; nor does it give that yellow tinge the vegetable alkali produces. It is even necessary to bleach silk for certain shades, to give them a clear bloom. About 25 lbs. good white soap, dissolved in sufficient clear soft water, for 100 lbs. silk; put the silk loosely in their bags, boil gently, say 2½ hours; cool and wash well, in a running stream; beat occasionally, to free it from all impurity; this I know by practice.

Rev. E. J. Boarman, *Randolph Centre*, *Vt.*—I am the only one in this region that has done any thing of consequence in silk, this side of Woodstock, that I know of. I bought four thousand five hundred trees two years ago, and put them on to about a quarter of an acre. I commenced with feeding (a row *hoed* entirely) with about 45,000 worms; 15,000 of these were the six weeks sulphur, and the rest white mammoth. The *sulphur* appeared sickly, and all nearly died before, or at the time of winding, so that I had no cocoons from them worth any thing. The white mammoth were healthy, but a greater part of them not having been exposed till the middle of August, were about ready to wind, when a frost entirely destroyed my leaves, and they were in a measure lost. I had in all about four bushels. They were kept in two rooms, in the second story of my house, which were not very well ventilated, and the windows down at night. The eggs were obtained of Mr. Ford, of Woodstock.

This year I procured eggs of Mr. Dexter, of Claremont, N. H., and fed about the same number. I had three or four thousand eggs—white mammoth, and a few sulphur—of my own, both of which kinds were very healthy, and wound well, and four other kinds of Mr. Dexter—about 6 or 8,000 of the *Rougwiermer*, 15,000 of the Nankin peanuts, 3,000 of the two-crop, making white cocoons, and in color like the sulphur, and 10 or 12,000 of what Mr. Dexter called the four weeks sulphur, but were in reality the seven or eight weeks sulphur. The sulphur appeared the best until after they commenced winding, when on a sudden more than half of them died. There were several others in this place who had about an eighth of an ounce of these sulphur eggs of me, which I obtained of Mr. Dexter, and they lost mostly all of theirs in the same way. There were three or four individuals who had about this quantity. I could not account for this failure in the sulphur, unless from defect in eggs, or changing them from a large garret chamber, after their fourth moulting, to a room less large below, and less ventilated; though my peanuts and *Rougwiermer* were in the same room; or from changing at that time from the white mulberry leaves to the multicaulis leaves. Those which I had raised of the peanuts, in the garret chamber, did the best by far.

It took about 200, upon an average, of the *Rougwiermer* cocoons to make a pound; 450 of the two-crop, white mammoth, and sulphur, and peanuts 300. I had feed enough for my worms both seasons, from my 4,500 trees (multicaulis only). I cut them off at the top of the ground last year, and sold the cuttings, and covered a part with the furrow, and a part were not covered, and they generally lived; though those not covered, the best. I have between eight and nine bushels of cocoons. Those which I pulled up last fall—about five hundred—and planted last spring, did not come up well, nor do half as well as the year before; but the cuttings about as well.

Charles G. Conkley, *Martinsburg, Lewis Co., N. Y.*—I give you my experience in the silk culture for two years past.

In 1842, I hatched, about the middle of June, 100 eggs of the sulphur variety. They grew well, were healthy, and wound up, in about five weeks, 96 perfect cocoons—fed on the white and multicaulis. After the third moulting, cleaned every alternate day. About the first of July I hatched, as near as I could estimate, 1,000 sulphur. They grew well until about the third moulting; my feed grew short, and owing to my ignorance in taking care of them, and neglecting cleaning them, they became diseased, and died rapidly for three days. I then changed them from their litter (which had accumulated to the depth of 3 inches,) which checked the disease, but they never wound a single perfect cocoon. A cold rain storm came on about that time, and I attributed the disease to that; but this year, to test that question, I put about 20, at two days old, out upon a white mulberry in my garden; and I think it impossible for worms to do better than they did (what the birds did not pick off,) up to the time of their commencing to wind. At that time we had a cold rain, which stiffened them so much that I carried them into the house.

About the 20th of June, 1843, I commenced with 120 of the drab peanut, fed mostly on multicaulis; gave plenty of fresh air; cleaned them after the third moulting every other day. They wound 112 perfect cocoons, six imperfect, though not bad, and two died after going up. When these were about two weeks old, I hatched about 2,000 sulphur; they did well up to the third moulting, when I neglected them, and they became diseased, and began to die. I immediately cleaned them off, and sprinkled some new slaked lime upon them, which almost entirely stopped the disease. I continued that treatment until they wound up. They made about 700 first rate cocoons, and about 100 poor ones. I hatched about 800 or 1,000 of the sulphur, at the same time I hatched the first, and gave them the same treatment, and they wound 750 perfect cocoons.

And now, from my two years' experience, I have come to the conclusion, that three things are indispensably necessary for the successful culture of silk. First, plenty of feed—it matters not so much what kind, whether white or multicaulis. Second, plenty of fresh air, and last, though not least, cleanliness and plenty of room, especially after the third moulting. And with these, there is no more difficulty in raising silk, than there is in raising sheep or pigs.

I have kept my worms each year in a small chamber,with but two windows, which would not admit sufficient air—temperature not regulated at all—fed on a close surface—which, I think, on the whole, is equally as good as branch-feeding on slats. I think the drab peanut is decidedly the best, most hardy worm, and makes the most silk and the best quality.

The multicaulis is, I think, preferable to the white mulberry, for two reasons—first, the leaves are so much larger, that it requires less labor to gather feed, and the worms like them rather better.

With regard to early and late feeding, I have succeeded best with the first hatching, and I would recommend, in this section of the country at least, to commence about the 20th June, or 1st July, with about one-half of the eggs, and the other half in 10 or 12 days after, for we most generally have a frost about the first or middle of June, and again between the 1st and 10th of September; and frost-bitten leaves will almost certainly produce disease.

HENRY CHAPIN, *Canandaigua, N. Y.*—I have fed the last season a small lot of worms, for experiment, upon multicaulis; and they did very well, and all of them, or nearly all, wound up. I began this season, and kept the eggs back in an ice-house until the 20th July. I then commenced with five ounces eggs, and they all hatched. I commenced feeding about 1st August, and they did well, and passed all their moultings well, and I did not lose any until after the fourth moulting. About the 1st September a few of them began to spin. They all at this time appeared healthy, but we had at this time three very cold nights and frost, and a cold storm, which lasted about a week. During this time the worms appeared to be in a dormant state, and the final result was, that I lost the most of them.

I have about two acres of multicaulis, and this is the second year's growth. I fed the worms upon multicaulis entirely, and in a covered building, but open at the sides, so that it was well ventilated. I shall try it again next season, but shall begin earlier, say about the tenth of June. I think probably my misfortune in this experiment arose from late feeding. I am inexperienced in the business—never saw a silk-worm, or saw any fed until I fed them myself. I should be glad to get the report of the convention.

CHARLES F. TAFT, *Uxbridge, Mass.*—Has fed worms two or three seasons in a small way, with some good and some bad luck—the latter on the whole predominating; knows that others do the thing and do it right, and therefore is at liberty to believe that the fault has hitherto been, either in himself or in the circumstances in which he has been placed. This year, by reason of the severe drought, came short of feed, and his worms suffered, as they always do in such cases, and last, though not least, the rats destroyed a lot of his eggs.

DR. M. W. PHILIPS, *Log-Hall, Edwards' Depot, Miss.*—I have planted the morus, and fed a few silk-worms for two years. The morus grows very finely, frequently to the height of 12 to 18 feet *from the bud*, and to a size of near three inches in diameter, quality of land, and care of cultivation making of course, vast difference. The tender ends of the twigs, from a few inches to a foot or so, become killed some seasons, as it often happens that a killing frost falls when the leaves are tender and the twigs in full growth. Last year we had worms in the gable end of our house, the room not plastered, with three windows of

12 lights each, 10 by 12 glass, and one door, frequently all of them, open; we were careful to feed on dry leaves, sprinkling air-slaked lime over them, and not cleaning the hurdles but a few times. We lost very few by disease, the ant proving our only enemy. This season we fed enough to make about one bushel of cocoons, and did not lose in all probability 100 worms, the most of which were mashed, or dropping on the floor, were destroyed by the ant.

We fed this season in a plastered room, 3 large windows of 18 lights each, and 2 doors, all of which were generally open from 8 to 9 o'clock, A. M. We were induced to make a fire in the room about daylight for a few mornings, the season being colder than I ever before saw in the south, though a native. I fed partly on morus and partly on the red (wild) mulberry. I have three neighbors that have fed more than we have. They feed on shelves, suspended from top of house, in, generally, a shed, weather-boarded with split white-oak clapboards, no sash, no fire. One of them fed in an open log-house this year, with not even a door-shutter, or the cracks of the house stopped. This lady, Mrs. Nancy Wells, wife of Mr. Wm. M. Wells, sent to our Fair a specimen of her silk, and a purse knit of it, on both of which she took a premium. She has been making silk three years, uses the common reel and the common spinning-wheel, and deserves great credit for her zeal, industry and public spirit.

None of the experiments I know of in this region, but have been very successful; and, except my own, I do not think a thermometer would vary one degree from the shelf where the worms were, and out of doors, except the blowing of wind would cause a slight variation. I have visited these fixtures each year, and know what I say. The loss is so trivial that neither could say if there *were any*. Besides which, I have seen the worms one to two inches thick on the shelf, crawling over each other; and when moved, they were taken up, not one by one, but really as taking up a handful of nails.

This season I fed worms with leaves well wetted with dew, so much so, that shaking them on the floor would pretty well sprinkle it, which we generally did. Heretofore we gathered dry leaves in time, or even wiped them dry, but it was so tedious we resolved merely to shake the water off, and our worms grew apparently more rapid than ever they had before. As a fact to prove this, they began to wind the 25th or 26th day. They were never fed after 9 o'clock nor before 6 to 7, generally 5 or 6 times a day, sometimes, though not over 4 or 5, giving them leaves, or branches with the leaves on them. Hurdles cleared off but seldom, and when done so, the leaves and stems were a mass of some inches in thickness, and sometimes even mildewed, and the odor offensive. We had made up our mind, that much of this feeding with cut leaves, all day and all night, cleaning hurdles, dry leaves, no moisture, &c. &c., was too much trouble, and unnecessary, and we tried the plan. We would not hesitate to feed in the open air, if it were not for birds, poultry, ants, and our heavy rains, all of which are enemies, especially the numbers of one and the quantities of the other.

The great difficulty in all matters of improvement in the south is, "it is too small a business," too much trouble, or too long to get the return. There are but few in this country who look upon the silk business as any business at all; but few who would have anything to do with it, and those are, to their praise be it said, entirely ladies. My own opinion is, that it is to us of the south, the greatest business that has ever presented itself. An old negro competent to feed young children or chickens, with the aid of a few small chaps, from 4 to 8 years of age, can make as much as grown hands can in the field, and without any expense of gin-house or machinery—in fact, at an expense of a few hundred feet of lumber, a workman can soon fix up the unoccupied portion of the gin-house (generally 40 by 60 feet,) with hurdles, &c., and thus make it a cocoonery when not used for cotton, it being only used for that purpose from the middle of August to January or February. I could, without any building, open a cocoonery 62 feet long, and some 20 feet above the earth—the gable of my gin-house. The hurdles, &c., could be packed out of the way in summer time. [Gill's tent and cradle better.—J. R. B.]

It seems to me to be a business peculiarly appropriate for the south. We can commence feeding the 20th of April (this year 16th, last year 24th). We can feed without taking our field hands, without any extra building; and all done thus, is entire gain.

D. H. SABIN, *Wellingford*, *Rutland Co.*, *Vt.*—I am but little acquainted with raising, or manufacturing silk, having but just commenced in the business, and that on a small scale as yet, and my object in this communication is to obtain information, not that I think of giving it.

I now have about three acres of trees, about half of which are the white, or Italian, the others the Alpine, one acre of which are set in hedge form, the other for standard trees, from which I have fed worms the present season that have procured me 80 lbs. cocoons, from which I have reeled 6 lbs. raw silk, and have saved about 1 lb. eggs, mostly of the peanut. The worms were fed in *an open building*, so much open that the wind would frequently blow the leaves from the shelves, where the worms were feeding, but still I do not think I lost one in a hundred of what moulted the first time. There was no disease among them.

The leaves to feed them were all picked by two children, one 11 and the other 12 years of age, during the last stage before winding. I think the bounty paid by our State well pays all expenses, with those who manage it right. But here is the fact. I am fully persuaded (at least so long as this bounty is continued), that five acres of trees of the age of mine (4 years from the seed), will produce more nett profit than can now be realized from 200 sheep, or from a dairy of 20 cows; and I trust the time is not far distant when the raising of silk in the United States will be considered as profitable a business as that of raising wool. I am of opinion that all that is required to insure a good crop of worms is to give them feed enough, and barely protect from the sun and rain.

P. S. I could have fed twice the number of worms from my trees if I could have got the number of eggs I wanted—the peanuts.

REV. S. S. ARNOLD, *Westminster*, *Vt.*—My silk business this year is hardly worth naming. The man who carried on my place, put out his eggs rather late. The first lot did tolerably well, but from some cause or other, he did not put out more than half, or one-third enough. The next lot were not healthy, so that we had only 4 1-2 lbs. of reeled silk. We fed in the same building as last year. Close building, but well ventilated. Fed on multicaulis chiefly. Last part of the time with harder kinds, especially the first crop. It appears to me we should have had three times as much silk, if the eggs had all been put out together at first. Mr. Clark, of this town, had good success the first crop, and poor the second. Mr. Adams, of Walpole, N. H., had one small crop only, but very healthy and good. I have lately seen Mr. Gleason, of Newport, N. H. He is on the place formerly owned by Mr. Messenger. Mr. Gleason told me that he has had very good success this year. He has fed none but the four weeks sulphur--considers them altogether the most healthy and profitable. He has fed almost wholly on multicaulis, and prefers this to other kinds of trees. His worms were from eggs of his own keeping of the year before. As I understood, he has not over four acres of trees, and those not large; and he thought he should make sewing silk, from his own cocoons, enough to realize two hundred dollars.

WM. C. FREEMAN, *Wyoming*, *Wyoming Co.*, *N. Y.*—1st. I have fed worms four years: the first year 1840, fed but few—good success. 2d year fed early, worms wound first of July, cocoons good, 15 bushels. 3d year fed but few early for want of eggs—good success; late crop poor, cold and rainy. 4th year, 1843, eggs hatched too early, bad success; 2d crop, worms healthy—cocoons light—cannot account for it.

2d. I feed in a frame building, merely enclosed, made for that use. The temperature I regulate, keeping the room warm enough for the worms to work.

3d. I have never fed in an open shed, but I have seen others do it with good success.

4th. I prefer the nankin peanut, or mammoth sulphur.

5th. I use the morus multicaulis principally, Broosa and common white are very good, but the facility with which the leaves are gathered, together with the greater amount of foliage, renders the morus multicaulis far preferable to any other tree in my estimation. I have managed many different ways. The best with me is to let the trees stand—cut the tops close in the spring, mellow the ground with a corn drag or cultivator, not destroying the roots. In this way you will get a number of shoots, and more than twice the amount of leaves than to let the tops remain on.

6th. From my experience, and those of my acquaintance in the silk business, I should decide in favor of early feeding, if not too early.

7th. In some cases of bad success in the business, there has been too much experiment in feeding: in some too cold and wet, or too late in the season. In many cases I am not able to account for bad success, except it be owing to the improper manner in which we keep our eggs.

8th and 9th. Not able to answer.

10th. The greatest trouble with us is in keeping eggs; they either hatch too early, or if kept back by being put into an ice-house, they are most always lost, or what is worse, hatch only to be sickly and amount to nothing. If we could keep our eggs good from hatching, we could do the fair thing in western New-York. The silk business is a good business, rightly conducted.

P. S. As this is the first time that I ever attempted to write upon this subject, you must take the facts and fill out as you shall judge best. [No need of that, friend Freeman, all right as it is. J. R. B.]

OLIVER MITCHELL, *South Britain, Ct.*—I have been doing a little at silk for four years. Have raised four or five bushels per year, of cocoons and sold them. I have been increasing my trees, intending to make it a business, but my worms have often died. My building is not sufficiently ventilated. I am desirous next season of trying the plan of open shed feeding. What constitutes an open shed? Is simply a roof over the worms, all that is wanted?

[We refer Mr. M. to Mr. Gill's description. J. R. B.]

ABIAL S. SMART, *Springfield, Vermont.*—I will inform you as near as I can the situation of our silk business in this place. There are quite a number in this place that are trying to do something at the silk business, but not all with very good success. I think that we have not got upon the right way of feeding. I have seen some notice of Mr. Gill's method of feeding. I should like to get a plan of it, or some information on this subject. We want a market for cocoons—have somewhere from fifty to seventy-five bushels in this vicinity, in a number of hands. There are more within five or six miles of this place, but I cannot say whether they will sell them or reel them. There is one man that has raised five hundred pounds.

JOHN MARSH, *Southbridge, Mass.*—In the spring of 1840, I planted about one-quarter of an acre of mulberry trees, principally multicaulis, and have averaged from them about three pounds of reeled silk each year since; although they have winter-killed badly two winters. I have raised this year enough for four pounds of reeled silk, and could have raised as much more if I had had good eggs. I have used many kinds of worms, but cannot determine which is the best. I have always fed in a tight room, have not had any good conveniences, and have been somewhat troubled, in the last stages of feeding, by their turning yellow and dying. I have come to the conclusion, that this is attributable to keeping them too thick and not giving them sufficient air. I have used various contrivances for them to wind upon, but find nothing as yet so cheap and convenient as bushes. I have not kept any account of expenses, but am inclined to believe, if we could have encouragement by a bounty from the State, until we could have time for experience and improvements, the business of raising silk would become both profitable and useful. I feel inclined, therefore, to multiply my trees.

John D. Dix, *Ithaca, N. Y.*—I received your Silk Circular some days since, and take the first opportunity upon recovering from a severe illness to answer, briefly, your questions, or as many of them as I can, satisfactorily to myself.

To question 1. I answer, I have fed worms three years, and the general results have been favorable. The second year better than the first, and this year better than both together. I have raised forty bushels this year, at an expense of $70, which is about the amount of premium I have drawn from the State, leaving me the amount received from the sale of cocoons as so much made.

Question 2. The first year I used the upper rooms of my house, badly ventilated, and was very careful to shut the windows nights, and build a fire cold days—*all wrong*. Second year, third story of store, long room, windows at each end; no artificial heat; windows closed in cool weather. Third year, an old ropewalk and barn, from which I took off boards all round, and let the air circulate freely night and day, in all kinds of weather; very few diseased worms. Spun in 30 days, and made the best cocoons I ever saw. I also fed the leaves as they came from the trees, wet or dry; used lime freely, and changed the litter but once during each age.

To question 3, I answer no, but think it would do well.

Question 4. The Mirable Jaune or mammoth Nankin peanut.

Question 5. Multicaulis, and heretofore they have managed themselves. Hereafter I intend to cut them down close to the ground in November, and lay down the tops at the same time, instead of waiting till spring.

Question 6. I have: the difference is greatly in favor of early feeding; for instance, from two ounces hatched 17th June, I obtained 135 pounds of the very best cocoons I ever saw. From 4½ ounces hatched June 28, I obtained 213 pounds, not quite equal to the first. From 4 ounces hatched July 10, I obtained 112 pounds, decidedly inferior to the first, though good.

Question 7. The causes of bad success in feeding that have come under my observation, are, 1st. Want of the pure air of heaven. 2d. They do not generally have sufficient room on the shelves.

3d. Their food is kept too long in cellars or some other vile place where it gets wilted or dried up. Give silk-worms plenty of food fresh from the trees, plenty of room on the shelves, and plenty of pure air, and then don't handle them too much, and there is no difficulty in raising them successfully.

To your other questions I am compelled to answer, No! I should have prepared specimens to send to your Fair, but my ill health and other matters have and will prevent me from doing so this year.

B. B. BARTON, *Gill*, *Mass.*—I commenced feeding silk-worms in the summer of 1840. Have continued in the business ever since.

The first season I purchased one ounce of silk-worm eggs of the large peanut variety, which were fed upon the foliage of the white mulberry in the early part of the season, and produced between 80 and 90 pounds of cocoons, and after selecting 8 or 10 pounds for eggs, reeled 7½ pounds of silk.

The second season I hatched two and a half ounces of eggs, which produced 189 pounds of cocoons. These were fed upon the leaves of the white mulberry, and hatched about the middle of June. I also fed a second crop with the leaves of the white mulberry and multicaulis, which wound 60 pounds of cocoons. The two crops, after selecting one bushel for seed, reeled 21 pounds of silk.

The third season, I fed about as many worms as the second, with nearly the same success.

My success the present season has been good, though taken as a whole not quite as favorable as heretofore. My first crop the early part of the season were healthy and did extremely well, producing 190 pounds of good cocoons. I did not succeed as well with the second crop of about 30,000, being busy attending the first crop that were winding. They were neglected and fed very irregularly in the first stages, and the different days hatching became mixed, which caused them to be uneven. They commenced winding the 21st of August. The weather was very rainy and they did not do first rate, but wound 80 lbs of cocoons. I also fed another lot of about the same number which did extremely well until they commenced winding, which was the 11th of September; the weather at that time had become quite cool with some frost. The building was closed, and by means of artificial heat the temperature kept between 70 and 80 degrees. Nearly two thirds went up and wound good cocoons, far superior to those of the second crop. The remainder did not appear to be affected with any sweeping disease, but most of them turned to chrysalis without forming any cocoon. This crop wound only fifty pounds of cocoons. The two last crops were fed exclusively upon the leaf of the multicaulis. From the cocoons raised the present season, I have selected two bushels for eggs, reeled 17 pounds of silk, and have cocoons enough to produce 4 or 5 pounds more.

The building in which I have fed is about 18 feet in length by 14 in width, and 7 feet between the posts. There are four windows, one upon each side of the building, which enables me to ventilate it freely. Unless the weather is cold, I allow the windows and doors to remain open during the day and some of the windows during the night. The space occupied by my first crop of worms the present season was nine shelves thirteen feet long and three and a half feet wide, also twenty-seven hurdles 3 feet square, and ten, 2 feet by 3. From a single shelf, 13 feet by 3½, I took down 15 pounds of good cocoons.

I have not paid much attention to regulating the temperature. When it was cool and damp, I have generally used artificial heat.

I have never fed in an open shed or tent, but have no doubt but the plan would prove successful in the early part of the season. I should have tried the experiment the present season had it been convenient.

I have fed two kinds of worms, the large peanut and the sulphur variety: though principally of the peanut, which I consider more hardy and less liable to disease than the sulphur. Though my sulphur worms have generally done well.

The trees used are the white mulberry and multicaulis. The multicaulis have never winter-killed to any extent, and I usually let them remain during the winter as they grew during the summer.

I have always been more successful with early crops of worms, than with late. I do not attribute it to feeding upon the leaves of the white mulberry, because I have fed some worms in the early part of the season exclusively upon the leaves of the multicaulis which produced as good cocoons as those fed upon the white mulberry. I consider the early part of the season more favorable to the growth and health of the worms than the latter part. My cocoons made by early crops have invariably yielded more silk than those produced by late crops.

My impression is that the cause of bad success among many is owing to their feeding worms produced from an unhealthy stock. A gentleman of my acquaintance has fed several crops: the present season he did not obtain but few worms from the eggs hatched, and many of those were sickly. He purchased some eggs of me, and as his others had yielded, did not expect more than three or four thousand to wind. The worms were healthy, and he obtained twelve thousand good cocoons. They wound as late as the early part of September. Mr. C. N. Morgan, of Northfield, has kept worms for two years past. He obtained his stock of eggs from me. Last year his worms were healthy, and he selected a few of his best cocoons for seed, and from these the present season, fed four or five thousand upon the multicaulis. They wound the last week in August and were as fine cocoons as any I ever saw. He was very particular, feeding five times a day at regular intervals, and making them eat up clean. If he over-fed at any time, at the next feeding he gave them less. He estimated at the time of winding that there were not more than fifty but wound good cocoons. Several other gentlemen have obtained eggs of me, and generally had better success with those worms than with worms produced from eggs obtained of others. I have always endeavored to select my best and most perfect cocoons for eggs.

I have tried the experiment of keeping but few worms upon a given space, and supplying them bountifully with leaves, giving them more than double the amount consumed, but they did not do as well as those kept middling thick, and given no more than they would eat. And from my own experience, I am convinced that in order to ensure good success, the cocoonery should be *well ventilated*, the worms obtained from a healthy stock, and fed as much as they will eat, and no more.

I am sanguine in the belief, that as people become experienced in the rearing of silk worms, it will be a profitable branch of business.

JOSEPH MCHANNAN, *Mack's Hill Cocoonery, near Reading, Hamilton Co. Ohio.*—In answer to the inquiries you make in your Silk Circular, I give you the following:

1st. I have fed worms the four last seasons, on too small a scale to learn the habits of the worm; did but little this season—gathered somewhat over 100 lbs. cocoons.

2d. My building is a frame, boards matched, floor above and below—can be closed perfectly tight—have a stove in the building to regulate the temperature.

3d. I have not fed in tents or open buildings.

4th. The orange cocoon are the easiest to reel, the fibre being the strongest. The peanut produces the most silk to the bushel, but it takes more worms to make a bushel. The white peanut, 4,000 make a bushel, weigh 14 lbs. when first gathered. The nankin peanut, 3,600 make a bushel, weigh 13 lbs. The mammoth sulphur, 3,000 make a bushel, weigh 10 lbs. 9 oz., when first gathered. I prefer the peanut for my own reeling, a bushel makes more raw silk; but the mammoth sulphur to sell by the bushel. The peanut has 900 yards of fibre, the mammoth sulphur 600 yards a little coarser.

5th. I use the multicaulis; trees that are designed for planting take up in the fall, lay them in layers, cover with earth, keep them from touching much, cover the heap with boards to turn the water off. In the spring cut off the limbs and roots, lay them in furrows, cover with a plough. They are more sure to come than if they stand out over the winter. If any miss coming, bend down the limbs of the next to it, cover it with earth, and it will take root, then cut it off and it is a tree. Cultivate them the same as corn. In the spring cut all the dead wood off. Be sure to cut to the quick. They do better to do it after the buds show themselves. I have cut the limbs three times from a part of my trees this season. They are now full of leaves again. The more they are cut the more branches will shoot out and produce more foliage, if the land is strong.

6th. I have found no difference in early and late feeding, myself, though my last worms were a failure. One of my neighbors, Mr.

Rogers, has been feeding all summer. His last worms wound up Sept. 20, he says they did as well as the first. They were the mammoth sulphur, fed in an *open barn*, on board shelves, took the weather as it came, were healthy and wound up well.

7th. I believe I can give the cause of the loss of my last worms. My first two crops did well, the third were kept in a *close room* till past their third moulting, many had died when they were taken to the cocoonery. My fourth crop were then coming on in the cocoonery; it rained and turned cool. The third crop would not wind, but wandered about. I darkened the room, but it did no good; I built a fire in the stove, they did better; but the building had to be *closed to warm it*. My young worms were then twelve days old, had passed their third moulting. I never saw anything to equal them. They all came out of their moulting within three hours of each other, each time, on the 4th, 8th, and 12th days; on the 12th day the building was closed; on the 15th they commenced dying by thousands, at first I could not account for it, but soon found the cause was the *want of fresh air*; threw part of them away, put *the rest out and let it rain on them two days and nights*; put them back, let them dry, covered them with lime, and they commenced eating—a part wound up. The disease they had was the yellows. The worms they came from had no yellows among them for three years before.

8th and 9th. I have made no trials, and have heard of none in this county.

10th. I am satisfied, to have successive crops, that young worms should not be kept in the same room or building with older worms. Worms, when they are winding, sometimes need heat; it makes them more lively, and they wind better. There should be fresh air let in every few hours. Worms before they commence winding are better without artificial heat than with it, in my opinion.

A cocoonery should never be closed, only in extreme cases. To retard the eggs, roll the papers in cotton batting, place it in a tin box not air-tight, put batting around it, put it in a wooden box, close the box, put it in an ice-house, in among the ice, even with the top of the box, and cover it 18 inches with straw. My eggs kept in that way came out perfectly dry, and did not hatch for 20 days, the best sign of being well kept.

I think the post-office department might make some arrangement to carry silk-worm eggs at say, 25 cents per oz. at most, while they carry mammoth newspapers for 1½ cents. The same weight of silk-worm eggs would cost three or four dollars. It is a severe drawback on the business, and I think it might be remedied.

I have not known an instance where worms were fed in any quantity in a close room, that they did well. It will not do to feed worms with tough, yellow leaves, it binds them up, and instead of spinning they turn to grubs and waste their silk. Farmers that two years ago laughed at the silk humbug as they called it, are beginning to make some inquiry on the subject. They are getting their eyes open. We have no bounty on silk in this State now, and there is no way to come at the amount produced this year, but it must be large, from what I can learn from different parts of Ohio.

I should like to be with you, but it is not possible. You have my best wishes for the success of your undertaking. I saw your Circular for the first time yesterday.

Doctor Daniel Stebbins, *Northampton, Massachusetts.*—I give the following answers to your several questions:

1st. I have fed worms for 7 or 8 years, with the sole view of showing that it *could* be done. This year made 25 to 30 lbs. silk.

2d. This season I erected a new cocoonery, in the midst of a mulberry patch 42 by 20—posts 8 feet *out* of ground. Roof covered with boards and battened, the sides and ends covered with slats 3 inches wide, and half an inch apart, extending from the eaves to the ground. Floor of earth. The interior apparatus consist of 4 sets of tables for feeding—extending from end to end, two of which are 4 feet wide, the other two, 2½ each; these tables consist of frames with slats across, one inch wide and half an inch apart (should be only ¼.) The tables are two tiers in height leaving passages to pass between of sufficient width; a third tier in height might be added, so as to accommodate half a million of worms; through every stage no artificial heat is used, but to exclude caloric the whole exterior is whitewashed.

Adjoining the above is a tent *wholly* covered with bass matting; through which the rains had a free passage. The success of the tent was superior even to the cocoonery.

3d. Have fed for several years in an open shed, in the barn-yard, but nothing to exclude birds and fowls—in other respects, the experiment was successful.

In former years, when the litter and branches were removed, worms were frequently carried out with the rubbish, and after several days' exposure to the open weather and rains, the worms have been taken in and did will.

4th. For making silk, the peanut variety has the preference, being less encumbered with floss—less gum—more length, lustre and strength of fibre than other varieties as testified by a skilful silk dyer, at a court appointed for taking depositions to be used in a trial pending in Nantucket, Mass.

5th. Having the *black*, *white*, *Canton*, *Asiatic*, *Broosa*, *Multicaulis*, and some other varieties, I have not found any to excel the Canton for its foliage, and the Asiatic for its abundant branches. The foliage of the Canton continues to the latest season in greater perfection than any other—and experience has demonstrated, that the worms not only prefer it for food, but being fed exclusively upon it, have attained a larger size, and made larger and heavier cocoons.

That our soil and climate, or both, are peculiarly adapted and more congenial to the growth of the Canton mulberry, than even China, its native soil, was suggested by Dr. Parker, when recently in the United

States, on being shown, at my office, the foliage from my plantation, the stock of which was sent me from China as the very best used in China for making their best silk.

The tree grows more rapidly in this continent than in China. In Jamaica, where it was taken by Mr. Whitmarsh, it attains the height of 15 to 20 feet in one season, unless headed down every three months, as is there the practice. But in China it is represented to attain only about 4 feet in the season; with us, some have grown 6 to 8 feet in a season, after being headed down in the spring, and growing in dry soil enriched by the decomposition of the foliage on its surface. I do not know of any compost so enriching as the foliage of the Canton mulberry; the foliage of the other varieties may be as rich, but I have not had the experience of it.

6th. An early crop of worms is preferable to a late crop—the succession of crops is an American *notion* to rival warm climates, or a device to use up all the foliage, which becomes abundant the latter part of the season, but is very unfit for the worms, being too rancid or deprived of its richness by drenching, or long continued rains. The same is true with tobacco or grass, unless remedied by sunshine and fair weather. By early feeding, the depredation of vermin or insects may be avoided.

7th. Bad success in feeding may result from numerous causes; among which are eggs spoiled by indiscreet management, or negligent feeding. The present season I have had evidence that there is *one-third* difference, or even more, between the product of worms faithfully and attentively fed, or fed with negligence and in a careless manner.

8th. It was my expectation and intention, to test the use of the mulberry foliage, both in its green and dry state, for making paper; and for that purpose had sent a quantity to the paper mill, but cannot have the experiment fully tried at present.

9th. It is hoped that another year will enable silk growers to render a good account of mulberry foliage for making paper—and of the bark of the young branches for the same purpose, or for making silk fabrics.

These objects being accomplished, together with the well established improvements for feeding worms, and the multiplication of the silk tree, to meet the present destitution of the country,—then shall we be prepared to make ready, take aim, and fire away at the silk target of 50 millions set up for the next ten years.

10th. Would the silk cause be promoted by introducing it to the notice of foreigners, flocking to our shores for agricultural purposes? With this object in view, a nursery of Canton mulberries is located at French Creek settlement in Lewis County, Western Virginia: where the soil, water and timber, are of the best quality, and the climate decidedly as healthy as any part of the United States. For a similar purpose, a large nursery of Asiatic mulberry is located at Rochford, in the northern part of Illinois, by Charles J. Horseman, Esq.

Upon the request of a gentleman residing in the county of Lewis, Virginia, I sent him silk-worm eggs. He remarks, that the farming interest requires some additional crop, which would at all times command cash, and in tqe production of which there would be no danger of competition or overstocking the market; and he considered silk to be that crop.

P. S. To show the excellence of the Canton mulberry, I subjoin the following records of an experiment made three years since, by my wife and daughters:

One of my daughters asked me one day if she might not feed exclusively with the Canton; I asked the reason; she said that she found that the silk-worms would leave the foliage of the multicaulis and other varieties to feed upon the Canton, if that foliage was on the table; I asked if it was *really* so. The answer was affirmative. I then asked the others if they had noticed a similar preference; each replied in the affirmative; not having so many Cantons then as of the other varieties, I permitted the eldest to have her request, and she took one shelf from that time, to feed exclusively with the Canton, and the change was perceptible very soon; these worms evidently increased in size, more than any others which were fed on different foliage; so much so that visitors noticed the difference, and said it ought to be published in the papers. In these early days of feeding, we had daily visitors from distant parts of the country; and when the cocoons were finished I invited seven gentlemen to examine them; at which time there happened to be present two gentlemen from the south, (silk growers)—Rev. L. D. Hatch, of Green Co., Alabama, and Dr. B. Hill, of North Carolina, who, with other gentlemen of town, were invited to examine the case. The scales were produced, and S. Wells, Esq., clerk of court, was appointed to try them by the scales; all of the gentlemen were of unexceptionable character, and disinterested. I had myself previously tried the experiment, by the scales, and found upon what I considered a *fair selection*, that the cocoons of the Canton feed were twice as heavy as the other.

But Mr. Wells tried various weighings, and selected the largest of each kind, fed on promiscuous varieties, and it *was singular*, that among those fed on the Cantons, there were scarcely any dupions. Mr. Wells did not know that they were double. Knowing myself that the result would be in favor of the Canton, I permitted him to do as he pleased, and after weighing, the result was, that 5 cocoons of the Canton feed were as heavy as 8 cocoons fed upon foliage of the other varieties; the experiment of feeding was, as stated above, without design, or expectation of such a result; but the difference of size was so apparent, that I thought it worthy of notice. Others have since *designedly* made experiments with similar results.

JACOB PRATT, *Sherburne, Massachusetts.*—I was not able to keep as many worms this summer as I had intended to do, in consequence of the June frost; as my hall which I feed in is well ventilated, I have not tried the experiment of *open feeding*. But my experience has taught me that a free circulation of air, *night and day*, is indispensable for the health of the worms. My hall is about 30 feet by

18 in the second story, over my wood-shed, having 9 windows, which let down at the top, and raise at the bottom, also an opening on the sides, one foot wide, with blinds which may be opened or shut at pleasure, thus securing any quantity of air desired. Thus you will perceive that I have fed my worms almost as open as tent feeding, as I keep the hall open night and day. The lot of worms which I kept this season were fed by my two daughters, with the exception of a few of the last days, the oldest 15 years of age, which they did besides helping do the work in the house in the same time. The worms were of the sulphur kind, and come off about the first of August, making between 80 and 90 lbs. of cocoons of the first quality.

It has been my object from the first to make the silk business a part of my farming business, in order to prove, if possible, that every farmer that has a family of children, may raise silk without interfering essentially with their other concerns, after a little experience in feeding. I feel confident that if farmers would devote one or two acres of land to raising trees and feeding from them, they would get more profit than from raising corn or potatoes, and with less labor.

My answers, therefore, are :

1. I have fed worms more or less for seven years, with good success the last years, and always good when fed the fore part of the season.
2. Building as above stated.
3. I prefer the sulphur kind, on account of their being more hardy.
4. I use the white and the multicaulis.
5. I have proved to my satisfaction, that everything depends on early feeding, in this part of the country.
6. There have been quite a number of persons in this vicinity, who have tried to raise worms, but have failed on account of keeping them too close, and not having sufficient feed.

I have not manufactured much, except what I have raised myself, which I make into sewing silk.

JOHN MAYER, *Niconza, Miami Co., Indiana.*—We raised, in Wayne Co., Ohio, and manufactured into sewing silk, something over $200 worth, the last three years. We also reeled some, and had it wove for ladies' dresses, at Mount Pleasant, Ohio, by Mr. Gill, a sample of which I enclose. [A superior article, J. R. B.] In answer to the last inquiry, I reply, that I am fully confirmed in the opinion, that silk growing and manufacturing are worthy the attention of American citizens, and that silk will soon be a staple product. There are several others in Wayne Co. engaged in this business.

JONAS N. SMITH, *Addison, (near Chimney Point,) Vt.*—We stand alone in our town, experimenting a little in growing silk for our own curiosity and benefit, as well as the benefit of the community, if, through our small experiments, they may in any way be benefited.

Fed this season six thousand worms, sulphur color, from white and multicaulis promiscuously—weight 18 lbs. Some sickened and died owing to want of proper ventilation, and crowded too thick on the shelves—fed in a small room with one door and one window—[six hundred enough for such a room. J. R. B.]—weather warm, door closed, window but few inches raised. One morning found worms sick and vomiting, took up two hundred for dead, placed them on a board in an open wood shed, next day *showed signs of recovering*—ordered them fed—most of them recovered, and made *good cocoons almost in the open air*.

Our method of keeping eggs has been to place them in a glass bottle, corked tight, and hung up in the cellar; they have kept in this way to the middle of June without hatching, but for late feeding this method will not answer in cellars as warm as ours. Some time in July, when the mercury stood at 83° in an upper room against a plastered wall, I placed the thermometer by the side of the glass bottle containing the eggs, in the cellar, and found the mercury to stand at 73°; examined the eggs, found them hatched and all dead. This prevented our feeding another brood from our late multicaulis.

We should be glad to receive from you or the convention, at some convenient time, the most approved method of preserving the eggs till midsummer.

Enclosed I send you one dollar as my mite to help on your efforts to establish the growing of silk in New-England. The multicaulis bubble has burst—the path to perseverance is clear—and Yankee enterprise will not suffer the silk grower to retrace his steps.

I esteem Mr. J. W. Gill's communications from Ohio, and Mr. Barbour's letter to Dr. H. Jewett, Dayton, Ohio, as valuable papers.

ELDER DAVID MITCHELL, *Greenwood Farm*, (*near Piqua*,) *Miami Co.*, *Ohio*.—Your circular has just been put into my hand, and I hasten to lay before you such facts as have come under my observation.

I have been feeding three years, but on a very limited scale, simply for making experiments. I have fed in my own dwelling-house, in an *open stable* with a ground floor, and succeeded well in both cases; but the worms arrived at maturity one week sooner when in the house, the apartment being kept much warmer, but the worms were not healthier than in the stable; they did exceedingly well except this season. One crop was injured by the children heating the apartment too much. (They did it in kindness towards the worms in my absence.) I had a little fire in the stove to keep the thermometer at 64°, but the little urchins raised it to 84° in the space of half an hour, and the consequence was, that they were taken sick, and about half died. I used *air-slaked lime* profusely once a day, which completely stayed the disease with a part, and I never saw healthier and larger worms, and they spun the largest cocoons. I prefer the mammoth sulphur. I use the multicaulis—cut the leaves while the worm is in its first stage—then whole leaves on a shelf, and during the two last moultings, give them the whole tree on a frame, and they turn down and spin in the brush.

I have always found July feeding to be the most successful. I have now six acres of multicaulis, planted last spring, and intend increasing to fourteen acres in a year or two. I intend planting in squares two and half feet apart, that they may easily cultivate both ways. [Altogether too thick, J. R. B.]

I have just returned from a visit to Richmond, Indiana, where they have been feeding a few years and have commenced manufacturing. You will hear from them. They have some beautiful specimens of shawls, vesting, dress patterns, thread, &c. &c.

I intend building a cocoonery this winter, but different from any thing I have either seen, heard, or read of. After I have tested its utility, if it should prove to be what I anticipate, I will give you my plan, the mode of heating, and the plan of my feeding frames. I constructed a small frame on my own plan, and found it to work admirably. I will make considerable improvement on it, so that three persons can attend as great a number of worms as fifteen persons could on friend Morris' plan.

In looking over the present tariff bill, I find that raw silk is but 50 cents per pound. I think that quite too low, and Congress should be memorialized on the subject.

From what experience and information I have on the subject of the silk business, I believe that silk will soon become a staple commodity of American industry. I have some silk thread manufactured by Mr. Tillinghaste, of Dayton, Ohio, which is pronounced by good judges to be a first rate article. He has a very simple spinning and reeling machine made in that place, and bids fair to do a good business. It is moved by water power.

A number of people in *these diggins* have been cruelly bit by the multicaulis speculation, and all cry out *humbug* at me for attempting to raise silk. I know of no person engaged in the business within thirty-five miles of this place. But notwithstanding their jeers and sneers, I am determined to *persevere* until I astonish some of the *natives*.

I am now engaged in farming, and intend the growing of silk for the present as an appendage, but I expect soon to make it the principal business, and just raise stock and grain enough for family purposes.

I will be anxiously looking for your report at the proper time.

JEFFREY HUTCHINSON, *Brooklyn, N. Y.*—I use the Singapore, or large Nankin peanut worm. The eggs are larger, and of course produce stronger and healthier worms than the other kinds. I think this worm will produce twice as much silk as any other kind I have ever used.

Answers to the Circular:

1. Four years. Not successful until I got the right kind of worms. First year 30 lbs. cocoons. Second year 90 lbs. Third year 130 lbs. Fourth year 311 lbs.

2. Building two stories, 15 by 20 feet. I warm it by furnaces, &c., while the worms are winding.

3. No.

4. Singapore, or Nankin peanut—large size.

5. Morus multicaulis. No other is worth the trouble, in comparison.

6. Succeeded best by early feeding, until I got the Singapore. Since then, I have done well in late feeding.

7. Yes. Loss by neglect in feeding, cleaning, &c.

8. No.

9. No.

10. We make all into sewings: sell it for four cents a skein. It is preferred by many to Italian.

Question.—What do you think of the silk culture for the United States?

Answer.—I think that, as a national business, there is none more profitable.

P. S. To hatch the eggs I take the rolls of paper containing them to bed with me, ten to fourteen times and it does the thing.

HORACE JANES, *Cornwall, Vt.*—In compliance with your request, I send you as full a report as I am able, of our operations in the silk business. It is about ten years since we commenced feeding worms. The most we have fed in any one year is about thirty thousand; the present year about twelve thousand. The results, since the first year or two, have been uniformly successful.

We use a wood-house chamber, which is so open that we cannot do much to regulate the temperature, and have attempted nothing more than to close the windows in cold damp weather; think that is all that is necessary.

I prefer a kind of worm we have fed some two or three years which were brought from Springfield, in this State, without any distinctive name. They are superior to those that have been sold in this vicinity. They are a large grey worm, making a sulphur colored cocoon. Their age I have not noticed particularly, but think the winding mostly completed in six weeks.

I use the Italian white. They were set out in rows six feet apart, and three feet apart in the rows, and cultivated as long as they would admit of it. Since I stopped cultivating they have gradually declined; and I have been thinning them out with a view to commence cultivating them again.

I have a few of the Alpine which I like well.

I have fed early. As far as my knowledge extends late feeding in this region has not been successful.

We have from the commencement wrought all our cocoons into sewing silk; a few of the first years on a common wheel, since then on a machine I had of John T. Truman, Esq., of Cornish, N.H., and we make a good article, and fair profit.

I have never used the multicaulis, as I have always supposed it would not answer in our latitude, but hope I may yet be mistaken. If it can be made to endure our winters, and come forward in season to carry through a crop of worms by the middle of August, it will do: I doubt whether here we shall find it profitable feeding much after that time.

I hope that in the promised report the compilers will be careful to designate the place or latitude in which any experiment has been made, when that will be likely to have any influence, that silk culturists in different parts of the country may have an opportunity to judge whether it would be likely to succeed in their particular location.

Harvey Loomis, *Otisco, N. Y.*—I have this year fed a few worms, the hatching of what I procured from two-thirds of an ounce of eggs, laid on paper, and taken from an ice-house the 20th of June. About one-third of them were of the sulphur colored cocoon, the remainder were of Nankin peanut (grey worm). My eggs all hatched the first week of July, the peanut about three days first. I fed them on the Italian and multicaulis together, without cutting the leaves, for about three weeks. I fed mostly wet leaves when I fed multicaulis, as my trees were small and the leaves would get dirty by the beating of the rains, so that I washed them before feeding. After that time I fed from the Italian trees, by cutting the twigs and sprouts and laying them on for about two weeks, and then fed mostly the multicaulis until they wound.

My place of feeding was a ball-room in a public house, and on tables covered with papers. The windows were provided with blinds, so that I could shut the blinds and open the windows at pleasure.

When they indicated a desire to wind, I provided them with bushes of various kinds; I used cedar, chesnut, oak, walnut, beech, maple, and bass wood, and I think the bass wood the best of the whole—the leaves are large and do not curl much, and by setting them up close, the worms will crawl in between the leaves and deposit their cocoons frequently four or five on a leaf, so that it is very easy gathering them. The floss comes off very clean, and there being plenty of room, very few double ones.

The earlier the worms are fed after the leaves start, I think the better. It has proved invariably the case, the latest fed worms in this vicinity have been nearly or quite a failure. I intend to reel my silk, and have provided myself with the Piedmont reel for the purpose.

IRA HOWLAND, *Pleasant Valley, Dutchess Co., N. Y.*—In answer to your question, I have had but little experience before the present year. I had calculated on feeding several crops, but the frost we had in June injured my multicaulis to such a degree, that I was under the necessity of cutting them down and hoeing them out, which prevented me from hatching my worms before 28th June. I then hatched about 40 or 45 thousand. I fed them the first three weeks on the Italian, the remainder of the time on multicaulis. When about three weeks old, they were too much crowded in consequence of not having my feeding frames finished in season to separate them, which produced disease among them before I was aware of it; by the free use of lime I soon checked it. I had about 35 thousand which wound very well; commenced winding in four weeks from the time they hatched, and produced 101 lbs. of cocoons.

The building used was a carriage-house, 20 by 24 feet; it was ventilated by three lattice window blinds, two at the north and one at the south. I use no thermometer. I never have fed in an open shed. I fed the mammoth peanut—that kind, I believe, is generally preferred. I have a nursery of Italian mulberry trees about seven years old; they are planted in drills about six feet apart. I have two acres of multicaulis, which contain about 20,000 trees; half of them are set in rows 1½ feet by 4, the remaining half are planted in drills; they are from three to six years' growth.

DAVID S. HOYT, *Deerfield, Franklin County, Mass.*—1st. I have assisted in feeding worms nearly every year since 1828.

The general results were favorable; our worms being usually healthy, and producing good cocoons.

I however recollect one very hot season, when the worms, being kept in a very close chamber, were unhealthy; and the cocoons that were made, although they appeared well, would not produce a single miller.

Another season, a healthy crop of worms were just ready to wind, when a very violent thunder shower came on, one night, with more vivid lightning and louder thunder than usual. The next morning at least nine-tenths of the worms lay entirely motionless, from which state they never recovered. We supposed this effect was caused by electricity, but never have heard of a similar case. [Was the room closed?—J. R. B.]

The 20th of July, this season, I hatched half an ounce of eggs of the peanut kind.

2d. Kept them in the house for the first eight or ten days, and then removed them to the granary or corn-house, a building boarded tight on three sides, and quite open on the west, with a large door on the south. The temperature was not regulated at all.

The half ounce of eggs produced two and a half bushels of excellent cocoons.

3d. I never have fed in an open shed or tent, but I am satisfied that a tent with the sides down during cold rainy days and cold nights, would be sufficient protection for the worms.

I believe that the question whether rain or wet leaves will hurt worms, is not satisfactorily settled. Some of my worms this season were wet by the rain leaking through the roof, but I could not see that they were injured by it. Care was taken, however, to dry their food in rainy weather as much as possible. This was effected by placing a coarse frame of small sticks over a stove, the heat of which rising and circulating between the branches quickly dried them. Frames may be placed about a stove so as to dry half a ton of Canton twigs in a day.

4th. The sulphurs and the peanuts are the only kinds of worms I have fed. I am satisfied that the large peanuts and large sulphurs are the two best varieties, and that there is little difference between them as to profits.

5th. I use the white mulberry principally; have a few Cantons from which I cut nearly all the young twigs and shoots.

The winter frequently kills all the young wood that has grown the preceding season, and occasionally some more. My trees are large, and my method of gathering foliage is as follows: With a large knife I commence at the lower branches and trim all the leaves and shoots, leaving only enough to keep the tree alive. The trimming is effected by striking with the knife instead of cutting.

6th. I have not noticed any difference between early and late feeding. I am told, however, by men of experience, that there is a difference.

I did not lose three per cent of my late crop the last season, and am satisfied that those worms that have attained their full size, when attacked by the yellows should not be destroyed. Let them be taken out of the cocoonery as soon as the disease appears, and be placed on winding leaves. They will seldom eat after the disease appears; therefore the only thing that can be done with them is to place them in a *different air* and where they can easily wind. With this treatment, about *thirty-three per cent* of my yellow worms produced tolerably good cocoons.

7th. An acquaintance of mine hatched a *pound of eggs* the first week in August. Ten ounces of the eggs hatched well, the others did not. They wound about the tenth of September, and produced only *three or four bushels* of cocoons.

The reasons of this failure are, that they were kept in the hatching frames until they actually crowded each other, and thus lost six or eight days' growth; then they were not fed sufficiently, as there was only one person who could attend to them.

After they were removed to buildings where they had sufficient room, the weather was unfavorable, and many more died, and none attained common size.

8th. I have not made mulberry paper.

9th. I have ascertained by experiment that one hour's immersion in *boiling ley* will produce such an effect on the young shoots of the Canton mulberry, that the bark may be *pushed* off with the hand.

Water, as far as I have observed, has no effect of this kind. I also ascertained that boiling ley poured on the smaller shoots in a cold vessel, and allowed to remain sixteen or eighteen hours would produce the same effect.

But notwithstanding the ease, rapidity and certainty of this operation, I do not think it worth much, for it does not separate the green bark from the white substance that we want, neither does it seem to be easily separated in any way. I think the ley weakens the white bark; if this should prove to be the general result, ley could not be used for this purpose.

Silk may be raised in New-England by every person who owns, or can hire, land. The experiments in feeding, and, indeed, in every part of the business, within two or three years past, have established facts enough with regard to the proper management of worms, to enable any person of moderate ingenuity to become, with little attention, a successful silk grower.

If cloth tents or sheds prove to be sufficient protection for worms, and Mr. Gill's *feeding cradle* is what he thinks it is, the silk business must speedily become as extensive as any business in the United States.

LEONARD AND HEPSY FARGO, *Pittsford, Vt.*—I will state a few facts respecting the silk business, from our own experience. We were the first that brought the silk-worms and mulberry trees into this section of the country. My native place is Connecticut, and my employment when young was to make silk. My father moved to Vermont, where there was not a mulberry tree or a silk-worm scarcely ever seen. I brought some silk with me of my own manufacturing, which the people rather disputed that I made by worms. I still had the same anxiety to feed silk-worms. I was confident I could make silk in Vermont as well as in Connecticut, if I could get the leaves. Accordingly I sent to Boston and obtained two ounces of white mulberry seed, and sent to Connecticut and obtained one hundred eggs, of which I saved only forty. The second year I fed five hundred, the third year nine thousand, the fourth year thirty thousand, and had leaves enough to feed as many more, but not house room. We have to manage differently here from what they do at the south. Our springs are backward—it makes our second crop late. I am now reeling. This is the fifth day. I have reeled fifty runs. I have twenty thousand more to reel this week. I will send you a specimen of my silk, and should be highly gratified to attend the convention, but the distance and multiplicity of business forbids.

We believe the silk business to be good, and that it will prosper.

MADAME BALDWIN, *New-Haven, Conn.*—[I am somewhat at a loss whether I am at liberty to give the following extract from a letter received from Dr. Stebbins a day or two after he returned from the convention. But on the whole I risk it. The exhibition which I made of the silk journal of Dr. Styles at the convention, the interest which this old monument of his industry and philanthropy awakened, the fact that there were then some fifty families in New-Haven engaged in the business, and now the fact that we have discovered a connecting link between that generation of silk growers and the present—more especially to preserve and bring into use the good lady's plan of winding;—all this must be my apology, if the case needs one.—J. R. B.]

"At New-Haven I called on the lady of Judge Baldwin, who fed worms at the time of Pres. Styles, who daily visited her, and them. She had good success and was as enthusiastic as the President himself. She was the daughter of the great Roger Sherman. She is (as the Judge said,) in favor of shelf feeding; but on explaining to her the cradle system of Mr. Gill, she acceded to its surperiority. She was greatly in favor of her own plan of a winding aparatus, viz: to fold paper like a fan. She said the worms would readily ascend and form cocoons close to each other, from top to bottom in each fold. This fan must be suspended over the worms—the wide-spread part within their reach—a good contrivance. I was delighted with the good lady's description of olden time," &c.

John W. Avery, *Morrisville, Madison Co., N. Y.*—I have been engaged in a small way in the silk business for about four years; the first two years experimenting on the cultivation of the mulberry, the different varieties, being doubtful at first whether the soil and climate where I reside would suit that shrub, and at the same time we fed a few worms. The results satisfied me that the silk culture is practicable in this region; and accordingly I made my calculations to go ahead in the business. Last year we (that is, my family) started with what we estimated to be about 20,000 worms of the grey sulphur variety, fed them on shelves in the chamber of our dwelling-house. The worms were healthy and made good cocoons; sixty-two and a half pounds was the weight, from which was reeled six and one-fourth pounds. We fed from the white mulberry at first, and closed up with the multicaulis, used no lime. Manufactured the silk into sewings. It was said to be equal to the imported; the manufacturer obtained the first premium at the county fair. We had to go two miles for most of our leaves.

This season we concluded to feed what we could from our own stock of mulberry, which was small. We therefore commenced with about eight or ten thousand worms, which were hatched about the 18th of July.

The worms soon discovered signs of disease, and we daily lost some of them, notwithstanding we made a free use of lime, and other remedies, such as vinegar and water, with tansy and wormwood soaked therein, sprinkled upon the worms, and the herbs laid about upon the shelves, until after the fourth moulting. From that time they had a better appearance, and made good cocoons, which weighed eighteen and a half pounds, from which was reeled two pounds, besides some saved for seed. These were fed in the chamber and shelves, as the former, and mostly on the multicaulis. I have enlarged my stock of mulberry this season, so that I shall have about three-fourths of an acre to use next year, and a few of the white mulberry. I intend to increase my stock of multicaulis, and erect a suitable building for a cocoonery.

The soil of land where my trees grow is not the best. It is a reddish loam inclining to clay, which holds the water too long; but it is the best I have. Some of the roots winter-kill. I cut the tops off in the fall, and save them to plant. There is no other person doing anything at the silk business in this town, though there are some making small preparations for the business through my influence. Others are waiting to see those get rich, as they say, before they go into it.

Scepticism and doubts are vanishing, and many are inclined to consider it a practicable, if not a profitable, branch of business.

By sending me any publications relating to the silk business, you will greatly oblige one who wishes information on the subject, and who believes it to be a great national enterprise.

E. L. NEWTON, *Athens, Georgia.*—I have been engaged only two years in the silk business. I have a very fine orchard of the morus multicaulis of about 7 acres; the trees are 4 years old. I have a cocoonery 36 by 40, two stories, and well filled with shelves, and under every shelf lattice-work for the worms to wind in. Last year I made about ten bushels of first rate cocoons, but not being acquainted with the process of reeling I did but little with them. My main object, however, was to ascertain what could be done in raising silk worms, so as to have a succession of crops: which was satisfactory, and which I deemed of great importance to the ultimate success of the business. As our seasons in this climate are much longer than they are in your State, it gives us a decided advantage in the number of crops we can raise in the season. Our climate, I presume, also suits the morus multicaulis better; as our winters are more mild and not so long, our trees are not injured at all except the tops, which are not matured. Our first crop hatched about the 1st of April; as they commenced winding I exposed the second crop of eggs, which I had kept in an ice-house; and so also with the third; and I believe a fourth crop might be made in a season, as we seldom have a frost before the 10th of October. Thus the hands may be employed during most of the year in feeding and reeling. And while on this subject, I will express my strong conviction of the wonderful adaptation of the multicaulis to the business. I had not a sufficient number of worms to consume all the foliage; I thereupon required the hands to feed from a particular part, so as to make it very bare. This would put out a new set of foliage, which would be in time to supply the next crop with young and tender leaves, suitable to the age of the worm. This I consider an important discovery, as the young worm would scarcely be able to subsist on the old tough leaf.

I find I have run into several of the questions proposed in your Circular, therefore shall not attempt to answer them in regular order. I have the black and the white worm, which produce the variously colored cocoons, viz: sulphur, orange, white, green, and Nankin. I have also the peanut, but not being able to reel, I am not prepared to say which is the best. I plant my trees about 5 feet apart, in rows, and cut every other row down, each year, within about 6 or 8 inches of the ground. Early feeding has been with me the best.

A decided and growing interest is felt in our State on this subject, and particularly in our village. I have many friends and neighbors who are looking to me to get information, desirous to know my success. And one object I have in this communication is to solicit your aid in procuring a suitable person, who may be relied on, to come to this place and undertake the business. I would prefer a young man, if such can be procured, who is acquainted with the process of reeling as well as of feeding. Several hundred bushels of cocoons might, and would be made, in this neighborhood, if they could be disposed of. One family, within seven miles of this, has made 30 yards of beautiful silk, and have made it up into ladies' dresses, and it is not inferior to the best French or English in appearance. Many others have made considerable sewing silk, which is said to be superior to the imported article. All we lack is a person who understands reeling. Send us a reel and a person who can use it, and we will succeed.

I know great prejudices exist in the northern States against the health of our southern States. But our village is healthy. We are at the head of one of the branches of the Georgia railroad; our place is destined soon to be a place of great business, and has for many years been the resort of those seeking health, so that undoubted evidence may be obtained of the health of the place.

I would be pleased to receive a copy of your contemplated report.

Dr. Dyer Story, *Windsor, Vt.*—I send you a brief statement of what two of the younger members of my family have done in the silk business the present season.

The eggs from which the worms were hatched were laid upon papers, which were folded up, and hung upon a beam in the cellar, until the opening of the spring, when they were removed to a hole dug in my cellar large enough to receive a box four feet square, made of inch boards, and surrounded with spent bark from the tanneries, on the sides and beneath, about six inches thick. The top of the box, which is even with the bottom of the cellar, is furnished with folding doors. Here they remained till about the 10th of July, when those for the first crop were brought up and exposed, and in due time produced their worms, the process of incubation not having commenced till thus exposed. And here I will take occasion to remark, that what remained were taken out on the 25th Sept., and appeared in as good condition as when put in. This crop was fed upon the leaves of the white mulberry, were very healthy, and produced forty-one and a half pounds of cocoons. A part of these worms were fed in an out-building, 16 feet square, boarded with rough boards, and the crevices battened with half inch stuff to render it somewhat warmer, and to prevent the rays of the sun from falling upon them. This room was ventilated by opening a window four feet square on the west side, and by a large door which was open when any one went in, but when no one was present it was kept shut to keep hens out. After the third moulting the worms were fed upon frames covered with straw, first with branches and afterwards with leaves; and although not cleansed after this time they were perfectly healthy, not one per cent dying from disease or sickness of any kind. The rest of this crop were fed in the chamber of my wood and carriage-house, one window in each end, and the floor made of loose boards. They were fed on solid board shelves, and although not cleansed after the third moulting, they were as healthy as the others. They spun their cocoons in three different kinds of fixtures—1st. In roofs suspended over the feeding frames made of very thin laths, cut by a circular saw, having mounting ladders, made of the same materials, an eighth of an inch thick and one and a half inch wide. These they readily climb, and thereby enter the roofs. 2dly. In shelves made of half inch boards six inches wide, long enough to cross the feeding frames, and a ledge nailed across each end about an inch thick, so by placing a sufficient number on the top of each other they form a convenient retreat for the worms, which they fill with their cocoons, and which are easily gathered. These shelves, however, should be divided lengthwise by a thin lath; which, rendering the aperture more dark, and presenting more angles to attach their floss to, they would be less disposed to wander about before commencing their cocoons. 3dly. In straw. Small bundles about as large as the wrist, and long enough to stand upright between the feeding frames, being tied near the lower end, and the top spread out, and the straw crumpled and bent in various directions, afford them great facilities for attaching their cocoons, and which they seem to prefer to any other. An hundred and twenty I picked out of one of these small bundles. A second crop have now nearly completed their spinning, and have been about as healthy as the first: although from their having being crowded too thickly upon the shelves, some of them were not of course full fed, and in consequence lagged behind till disease and death overtook them. These errors must be avoided next year.

I have thought proper to give this brief account; for, although the operation is small and unimportant, yet it shows what may be done on a more extended scale. I have read and thought much upon this business, for the last ten years, and have become fully convinced that it will ultimately become an object of great national importance, and that our silk product will one day be second to no other; and had it not been for a continual press of professional business, I should at this time have been fully engaged in the business.

CYRENIUS HAIT, *Somerset, Pulaski Co., Ky.*—1st. I have been feeding silk-worms for three years in a small way, in a common building, without any way to regulate the temperature at all.

2d. The first year I fed the greater part of our worms on the black or native mulberry. The silk was strong, but not as glossy and fine as the two last years. While we have fed on the morus multicaulis our worms have done far better than I had reason to expect, as the only knowledge I had was drained from the Silk Journal. 3d. I have never fed in an open shed. 4th. I think the present peanut variety preferable to any I have tried. 5th. I am now cultivating the morus multicaulis, and am well pleased with that variety; have about 15 acres well set, and they stand the winters well. I intend topping to what we call low branch, as the leaves are larger and more convenient to gather. 6th. Our early feeding has generally done the best. 7th. The only difficulty with our neighbors seems to have originated from want of cleanliness and room; say in 4th age, sometimes a room shut tight over night. 8th. Have no knowledge of the use of mulberry for paper. 9th. I have never have seen any thing like water-rotting mulberry for any purpose.

I purchased a Piedmontese reel in Philadelphia three years since, and reel all our own silk, some of which I send east to find a market. I suppose 50 lbs. will be something like the amount I shall reel this season, besides what we use for sewings in this neighborhood.

I shall be able, after the legislature convenes, to give an entire account of all silks grown in our State, as the receipts will show, through the auditor of public accounts. I have no hesitation in saying that silk is to give employment to multitudes in the United States.

James Underhill, *Constantia, Orange Co., N. Y.*—I am a silk grower. In 1840 fed about 500 worms with good success. In 1841 I succeeded in raising 39 lbs. cocoons; did middling well. I had no place for keeping them but the chamber of my log house; some died, but my inexperience and want of a place explains the whole. Convinced that the silk business would be a permanent business in this country, I entered into partnership in the year 1842 with Curtis R. Cable for four years. The first year the building was new and green, and very damp. My worms died very much. I succeeded in raising 159 lbs. Our cocoonery is 18 feet wide, 88 feet long, one and a half stories high; a ground floor, well ventilated at the top and bottom, by means of a swing board, so as to open a space 9 inches wide from one end to the other, top and bottom. But I did not give fresh air enough, kept the ventilators shut nights, and when the weather was cool; but I have learned that one cold night, unless it is cold enough to freeze the worm, will not hurt them; it only renders them torpid and stops the growth; but worms will not be as likely to be sickly in a temperature of 65 as 75 degrees, but will spin much sooner in a temperature of 75 than 65 degrees. In 1843 I have already gathered 390 lbs. cocoons, although I have had some losses. My first crop did well; I had 249 lbs. cocoons. My second, although I hatched twice as many eggs, made but 131 lbs. cocoons. My third was as large as my second, but I shall not have more than

25 lbs. cocoons. But I have a large crop of worms, my fourth crop; they moulted the second time, Sept. 16th, and are doing first rate. I think I shall make a living this year, and that is about all. But I am not discouraged. We sent to Connecticut and got a young woman to come and learn us to reel; my wife and daughters are reeling daily. They reel three-quarters of a pound per day, and it looks very well. We have reeled already 38 pounds of silk. I prefer the sina mirabel worms; they are, I think, much hardier than the peanut.

There are several persons in the business within a mile of this village, and several more that intend to do something at feeding next season. Luman Sperry has raised rising of 40 lbs. of cocoons this season: had some bad luck, fell short of leaves, had his worms crowded. Miss Cable fed two crops with good success, had 70 lbs. cocoons, principally the sina mirabels, and a few of the Nankin mirabels. Sareno Clark, Esq., has fed a few as his first crop, and had 14 lbs. cocoons; his second crop has done first rate, lost scarcely a worm, and had 21 lbs. cocoons. Sina mirabels, or white mirabels. Wm. Wright has raised a few cocoons last year and this year with good success.

I find by experience that by sifting a coat of quicklime on the shelf before putting the worms on, will prevent the latter from getting damp and sticking to the shelf. I have used some lime on my worms and think it good. It absorbs the moisture and keeps the skin of the worm dry. I have used chloride of lime standing about in dishes this season. I think it is very good. I feed on multicaulis exclusively; about eight acres of trees; two or three acres have been standing three years, the rest were planted in the spring of 1842. They are planted in rows 3½ feet apart by 2 feet. They were all cut off to the ground last spring. They are now from 3 to 6 feet high. Our trees kill down in the winter, but if they did not, I should cut them off every spring. The ground was in good order when they were planted. It has not been manured since, but has been well tilled.

M. P. H. Janes, *Carthagena*, *Mercer Co.*, *Ohio.*—I am one of the colored settlement in this place. We have forsaken the cities, and the employments in which we were formerly engaged, and in which so many of our brethren are still engaged, and have taken up lands, believing this to be the best course for ourselves and our race. We wish to *be* something, and therefore must *do* something.

We are engaged in general farming. Some of us have thought a good deal about silk. Some silk publications have fallen in our way. Some friend at the east has sent us two or three copies of the Report of the New-England Silk Convention. We acknowledge the receipt of them with gladness. We have also seen some of Mr. Gill's letters published in the Cross and Journal. I read some of these silk documents before a portion of our settlement. They are interested. How much they will do I cannot say. Our friend A. W. is in the business, in a small way. I intend to see what I can do in the matter, and give the business all the encouragement in my power. We want information on the subject—shall be thankful for anything of the kind, or anything else that tends to our elevation.

James Landers, *Lee, Mass.*—I have fed silk-worms, on a limited scale, for four years past. The first year, I fed the two-crop variety; and as it was the first effort, they did, as we thought, remarkably well. I had to go abroad so much after feed, that there was no honor or profit in the business, except to learn how to avoid being caught in such a scrape again. The building I used is a chamber under the roof, and a very bad place it is, I assure you. I had no way of regulating the heat or cold, but by opening or closing two or three windows; and if silk-worms were not as sure a crop, under unfavorable circumstances, as any other, I am sure I should have lost all of mine. I have this year fed a part of my worms in an open shed; and all the trouble I experienced from it was, that it was too open, having but little more than a temporary roof for a covering. My worms did well in this shed; but I think they week or ten days longer coming to maturity, owing to the coldness of many nights, and some days, which prevented their feeding as fast as they would with a more even temperature. Here I would state my opinion on this part of the subject, and it is probably the sentiment of all who have had four or five years experience in feeding. It is, that plenty of room, plenty of good fresh leaves, and plenty of pure air, with an even temperature, will almost invariably produce a rich crop of silk. I think Mr. Gill's Feeding Cradle is a labor-saving machine in this part of the business, a decided improvement over every other plan of feeding. I would suggest in regard to a building for feeding, whether on the ground. in the form of a tent, or in an upper story, whether it would not answer better than any other plan, to fix a room similar to a drying loft in a paper mill. They are peculiarly adapted to letting in and shutting out fresh air at pleasure. I prefer the large Nankin peanut.

The kind of trees that I use are the multicaulis, Alpine and Italian. As to the managing of them, I keep the ground tilled between the rows, and take off leaves, and cut off branches, to feed as occasion requires. I let them stand out through the winter, and the tops that are killed by the frost are headed down in the spring, and an abundance of fresh stock comes up, looking like a swamp. The multicaulis kills no worse with me than the other kinds; and I think, that if the ground is frozen hard they would not be injured at all. I find that fruit and other trees are injured the most where there is the least frost in the ground. As to early and late feeding, I know of no material difference, if you get through the early part of September. The last that I fed closed with dog-days, or soon after, and did as well as I could wish. As to the causes of bad success in feeding, in regard to myself, I have only to say that my failure has been, feeding in a confined room, worms too much huddled together, and want of good fresh feed. These things I shall endeavor to avoid in future, and would advise others to do the same. In conclusion I would state, that it is my firm belief, that the raising of silk in this country is destined to be one of the most honorable and profitable employments that we can engage in.

J. R. BARBOUR, *Oxford, Mass.*—It is fifteen years since I began to examine the silk business as a permanent branch of American labor, and seven or eight that I have been engaged in it, more or less. The whole result is, an unshaken confidence in all the great principles on which the business is based.

My business has not been large. I have grown cocoons enough to make from 3 to 37 lbs. of reeled silk in a year.

The results of my own labors are decided in favor of early feeding. Out of all the crops that I have carried through by the middle of August, I have never lost, by disease, five per cent in any case. Not so with later crops generally, although this year my later crops were healthy, and made first rate cocoons.

As to buildings, I have fed in a large open garret, in a corn-house, and a carpenter's shop. In 1840 built a regular cocoonery, 30 by 20 feet, two stories high, with ten windows in each story. In 1842, fed a lot also in an *open shed*, and this year in a *tent* with cradles, on Mr. Gill's plan. The result of the whole is, in my judgment, *the more air the better;* only guarding against sudden gusts of wind, that will disturb your leaves or bushes.

As to ordinary turns of cold weather, in our summer months, their effect is to render the worms torpid. Of course they will not, in this state, eat and grow, and there is a loss of time in getting them through; and this is the only loss to be apprehended. Upon returning warmth they revive and go on with their wondrous labors, apparently uninjured by their temporary interruption—like the honey-bee, the house-fly, and other insects subject to torpidity in a low temperature.

But, as I have given my views to the public in full on this whole subject, in a very valuable collection of Silk Documents, just published by Messrs. Greely & McElrath, New-York, I pass to another topic, on which your correspondents have said little, and on which my experience has been quite full and quite disastrous—I mean, in the management of trees. I do this because the design of the Institute is to collect *facts*, as they have occurred in the experience of individuals, for purposes of instruction to others, as the only way in which this or any new business ever became successfully established. To this end it is essential that we give the whole, blunders and all. Some of our mistakes and blunders are chargeable upon the mis-statements of interested dealer in trees, seed, &c., and some to our own want of experience and due consideration.

My first movement (1837) was wrong. Bought a lot of mulberry seed as "Genuine Chinese Mulberry Seed," which proved to be an inferior variety of the White—lost two seasons in getting started, and some patience withal. In 1839 planted $100 worth Alpine cuttings. According to the "*books*" I was not to lose 1 in 50—in the result did not get 1 in 50—should almost as soon recommend the propagation of oak bushes, by cuttings, as the Alpine, or other hardy varieties of the mulberry. Same year planted Canton and multicaulis. They vegetated very well, but had a small growth—I had been taught to believe that the mulberry tree will flourish finely where nothing else will grow—quite a mistake. I took my trees up too early, and lost many the ensuing winter.

Thus far I have been operating upon hired lands. In 1840 began on the farm where I now live—lands all sadly exhausted—planted two acres, chiefly with the multicaulis and Cantons, by laying the trees whole length in the furrow, manuring them with a cheap compost, made principally of peat mud properly prepared. They did well, and made an average growth of three feet—let them stand as they grew, and they all wintered safely. In 1841 planted three acres more, in like manner—season dry, average growth two feet—left all out as before.

But the winter of 1841 and '42 was very open—no snow, frequent and heavy rains, with constant freezing and thawing. My ground is a *plain* very level, and the water stood and *froze* in many places—trees not ridged up with the plough, in summer cultivation, as they should have been on such land, to guard against this danger. The result was that I lost the whole of the three-acre lot, and at least three-fourths of the other.

To me this was a sad disappointment; and for a few days, in March, 1842, for the *first* and the *last* time, I had feelings of unconquerable discouragement creeping through my frame. True, the winter had been peculiar—nothing like it for twenty years. But just such winters may come again. In this state my first movement was, to despatch some 25 or 30 letters of inquiry to silk-growers in New-England. The mails, in due time, brought me this return, that the injuries of the winter, severe as it was, had been confined to trees planted as mine were, *whole*, and *horizontally* on *flat ground*, without being ridged up. I was greatly relieved to learn, that in all cases where they had been set *deep*, *one root* in a place, on dry sloping land (or ridged, if flat,) rich enough to make good extended roots the first season, they had gone through the winter safely, pre-eminently bad as it had been.

Feeling, therefore, that I then knew *the worst of the case* (as we could not have a more unfavorable winter,) I went directly to work with augmented confidence, to repair my loss. I ploughed up my lands, saving every live tree—sent 35 to 40 miles and bought others, so as to plant seven or eight acres, and thus *began the silk business anew* in 1842, and *began right*.

As to trees, I prefer the multicaulis, the large-leaf Canton, and the Asiatic. Managed as indicated in the above details, they are essentially safe from the perils of winter anywhere between Canada and the Gulf of Mexico. If not thus managed, they are in danger anywhere and everywhere, where it is cold enough for *ice to form*, and the ground to freeze. It is not the degree of cold that does the injury in this and similar cases, but freezing and thawing. Everybody knows that a peach tree is more safe on the north than on the south side of the wall, and for the reasons here stated. I would not, therefore, give a dollar for a full insurance on all my trees, if the thermometer would just be pleased, in December, to drop down to 20 degrees below zero, and stay there until the last of March.

As to the feasibility of the silk business in this country, I have no doubt. I must unlearn all that I have learned upon the subject for fifteen years, undo all that I have done, unsay all that I have said—unhinge and upset all the abiding and fixed impressions upon my own mind before I can begin to doubt.

DR. A. SPAULDING, *Zelionople, Pa.*—In answer to the Silk Circular, permit me to say, that I have been engaged somewhat in the silk enterprise for a few years past. My first feeding was in 1839, on a small scale, by way of experiment—success satisfactory.

1840.—In Newport, Ohio, made 300 lbs. of cocoons. Fed from the white Italian tree, by cutting off the entire limbs, which I think is the best way, as the limbs shoot out again with surprising rapidity. We failed in reeling our silk for want of experience and suitable apparatus; and although we were not satisfied with our success that season, it was because our expectations were raised too high by the wonderful stories in "Silk Culturists," "Silk Farmers," "Silk Growers," &c. &c., but can now see that our success was great, and should have been satisfactory. We fed in an open shed. Worms, white and brown—mostly white—very heathly. Fed early.

1841.—Had charge of the New-Lisbon Cocoonery, Ohio. Fed about 1,000,000 of worms, in a large close room, without fire—temperature variable from 50° to 80° Farenheit—sometimes a variation of more than 20 degrees in as many hours, and yet the worms grew rapidly until the 4th age, when they appeared to be less healthy. Did not wind well at the commencement, but when about half had wound up, my cocoonery was consumed by fire,—loss, $1,000,—since which time I have had no means to prosecute the business. I have been teaching school for a livelihood, but have been a close observer of the experiments of others. In this place the morus multicaulis "madness" has almost destroyed the silk business, and now even to name the hated thing is a reproach and a disgrace. Yet a few have made a little silk; but having been at great expense for fixtures, they have, I believe, about given it up.

In 1842, some half-dozen or more fed worms here, but failed, as they think, from the impracticability of the silk business; but I think they failed from their own injudicious management. They fed mostly in close plastered rooms, and closed every avenue to fresh air; and when the worms were about to wind, every worm that could be seen raising its head was picked off with the hand and removed from the feeding to the winding shelves, and sometimes were thrown a distance of some four or five feet, as a boy would toss a ball. Thus they failed, and then charged their failure to *impracticability;* and those who have had trees have grubbed them up, and the silk business is dead in this place. And yet, sir, would they have given me the use of their out-houses and a few hundred feet of rough boards, I am satisfied I could have made silk to good profit; but this they would not do. I could not hire an acre of mulberry without paying as much for the leaves as I would reasonably expect to get for my silk, when brought to market.

But I am fully persuaded that the silk business is practicable, and I would be glad to enter into it with some one who has the means and would enter into it in the right way, and be satisfied with a reasonable profit. We have a silk weaver here who says our silk is better than silk he used to weave in London, where he wove for twenty years.

I will now proceed to answer your questions in the Circular, as far as I can; and those I cannot, I will leave a blank.

Question 1.—Ans. Three years. Satisfactory.
" 2. " Open shed. Atmospheric temperature.
" 3. " Yes. Result, successful.
" 4. " Probably the peanut is best.
" 5. " Mons Alba—cut off the limbs.
" 6. " Yes. Early feeding is best.
" 7. " Answered in the body of my communication.
" 8. " No. I will ask our manufacturer to do it.

I should be glad to meet you at the convention, and exhibit a model of my silk-worm frame and hurdle, if I could; but misfortunes have pressed hard upon me, and I am not able to meet the expense. I should be glad to receive a copy of the anticipated report; and if any one at the convention wishes an active partner in the silk business, I would be glad that he write me on the subject.

JOSEPH BELCHER & SONS, *Richford, Tioga Co., N. Y.*—In the spring of 1839, we procured 3,000 multicaulis mulberry trees from the State of Connecticut, and planted them in this town, from which we reared a few worms of the sulphur kind, and manufactured the silk into sewings that sold well in market. We have steadily increased our stock of trees and of silk. Last year we raised about 1,000 lbs. of cocoons. This year, owing to some cause unknown to us, we have not made quite so much, but have still found it much more profitable than other branches of farming. Our building is 36 feet by 50, three stories high. We have only occupied the two lower stories. We are now using, and are much pleased with Morris' feeding and winding frames, particularly the latter. We regulate the temperature by stoves in the rooms, with pipe to conduct the heat through the apartments. We have not fed in open tents.

After three years of careful experiment, in the same room and with the same care, we have come to the conclusion that the peanut worm is altogether the best, and have changed our entire stock for that variety.

We use the multicaulis altogether, and till the ground as we would for corn; then plant in drills, by laying a continuous line of trees, root and body, until this year; and this year, the body only, which was severed near the ground last fall, and buried in the open field, by placing a layer of trees, and then a slight layer of dirt, and so on until the heap was raised as high as we wished; and our crop of young trees this year is as good as when we have planted root and body both. We find our account in cultivating well through the season, in the increased amount of leaf and growth of the tree.

We have fed worms early and late, and are altogether in favor of early feeding, our early crops uniformly doing from 25 to 50 per cent better than the late ones. There are several persons in this county that have commenced the silk culture on a small scale, and have had uniform success, except in late feeding.

Our experience is, that the silk culture is much the most profitable of any branch of husbandry in this section of country, and we feel confident that it will ere long spread through the Union, and become second to none, except the cotton growing interest, even if it does not take the lead of that also.

It would have given us great pleasure to attend your convention, but poverty prevents, and we must be contented with this method of casting our mite into the treasury of useful knowledge and experience on this truly interesting subject.

EPHRAIM MONTAGUE, *Belchertown Massachusetts*.—I have received the Circular to silk growers, and heartily approve of the proposed convention, and think it may accomplish much. I hope to be able to meet with you. I feel a lively interest in the silk business, and for a number of years past I have had a good degree of confidence that it will ultimately succeed, and be a rich and permanent blessing to this country. I have been engaged more or less for nine years past. I commenced on a small scale, and as my trees multiplied, I enlarged my operations.

In the spring of 1840, the last week in May, I planted 3,000 roots of the multicaulis and Canton varieties, on one-fourth of an acre of land; and although the trees were very small and backward the fore part of summer, still I was able, during the feeding season, to pick from them upwards of 1,300 pounds of leaves, with which I fed 40,000 worms, which made 126 pounds of cocoons, and upwards of ten pounds of raw silk, worth $51.50. Cost of producing it $36, leaving more than $60 nett profit to the acre the past year. With the State bounty, I realized more than this. In 1841 I produced in all over 600 pounds of cocoons, and had pretty good success, except losing some bushels of cocoons by curing them with camphor, the quantity used being too small. The millers would come out and spoil the cocoons. We reeled but 27 or 28 pounds. In 1842 I produced but 245 pounds of cocoons, and reeled 13 pounds of silk, although I hatched more worms and bestowed upon them more labor than I did the year previous to get 600 pounds of cocoons; but the late frosts in the spring destroyed the early feed, and the unusually cold nights and heavy rains in August destroyed our last crop, so that the result of that year's effort was, on the whole, rather unprofitable. Still I was not discouraged, although sadly disappointed; and as my trees were a part of them growing on my neighbor's land, for which I had been paying ten to fifteen, and even twenty dollars an acre yearly rent, and as he wanted them removed, in the spring of 1843 I ploughed up about half of them, and sold them to individuals in a neighboring county, who were commencing the business. Of course I was cut short in my supply of feed, and concluded to feed a less number until I could increase my supply of leaves again. I commenced the 22d of June; hatched about six or seven ounces of eggs, one and a half ounces of the mammoth peanut, three do. of sulphur colored, and two do. of the common peanut. The last mentioned I think must have been poor eggs; they did not hatch well, nor grow well, nor wind well. They never half paid for their keeping; but the other two lots did well. From the four and a half ounces I had about 250 pounds of good cocoons. They were fed mostly on multicaulis and Canton leaves, except a part of them the last week were put upon the white mulberry, as I had but one acre of multicaulis and Canton to depend upon. I had to buy about 1,000 pounds of leaves. I found no bad effects produced by changing from one kind of feed to another, neither could I discover any difference in the silk.

I think I derived great advantage this year by adopting the open feeding system, so far as I could, in my cocoonery, which is an airy place, and well supplied with large doors and windows on every side. I opened *them all, and kept them open day and night*, except in a very few instances, in extreme weather, or high winds, they were partly closed. I used no artificial heat, but let the worms take the weather as it came, the thermometer varying from below 50° to upwards of 80°; still the worms were very healthy, and wound up well at last. We had 300 pounds of cocoons, and I think we shall have nearly 25 pounds of raw silk, besides saving 15 ounces of eggs.

The expense of producing the silk this year has been comparatively small, the most of it being done in my own family. I paid about $13 for leaves and hired help. I fed but one crop this year, and I think, *as a general thing*, *early feeding* is to be preferred; although in 1840 my last crop was the best. And now, in conclusion, I would say, that in view of the general results of my efforts in the business for several years past, it is my candid opinion that the silk business, if wisely managed, can be prosecuted with as little risk, and as great, and I think, *greater profit*, than the raising of corn, rye, butter or cheese, wool or flax, or any of the common productions of the farm.

I have been doing a little at manufacturing sewing silk this year in my family. I procured a machine for twisting it last winter, which is worked by hand labor, and we have, at odd spells, twisted about twenty pounds, which is called a good article, and sells very readily at eight dollars the pound. I purpose to exhibit a sample at the Fair, both of raw silk and sewings.

CHARLES B. CRAFTS, *Woodbury, Conn.*—1. I have fed in a small way for three years, and my success not very good.

2. I use a large machine-shop. It is well situated for a free circulation of the air. Temperature not regulated.

4. Prefer the peanut.
5. Use the multicaulis.
6. Early feeding is best.
7. I attribute my own want of success in feeding to the *richness* of the soil on which my trees stand. [More probably the close shop.—J. R. B.]

Questions addressed to manufacturers I answer thus:

1. Two years.
2. Sewings and twist.
3. My operations have been small. I am now making arrangements to manufacture one thousand pounds a year, with machinery of my own invention.
5. Two hands.
6. American silk well reeled is best.

MRS. HARRIET MCLANAHAN, *Philadelphia, Pa.*—In 1841 the interest manifested in the silk cause was very great; not only in raising the cocoons, but in finding a market for them when grown. Seeing the necessity of a *public filature*, to which all could resort, and having the knowledge (which I had obtained many years before, from Europeans,) I was induced, for the good of the cause (and with some persuasion,) to step out of private life, into public, and in July I opened my present establishment; and since which time I have kept three and four reels (out of six) constantly running, until the expiration of the past year, with which the *bounty act on silk-growing and reeling* ceased in this State; and I regret to say that the *non-renewal of the act* seems as far as I can judge, to have struck a chill upon the silk culture in this part of Pennsylvania. I have, however, kept my filature open, "hoping still, in something onward." But I fear that my labors may terminate ere long, for want of the raw material.

In answer to your questions on growing silk, I would say—

1st. In 1824, I fed, for amusement, 25,000 of the sulphur variety of the silk-worm, with good success. I do not recollect a sick worm among them.

2d. The building occupied was a frame, rough-boarded, to keep off the storm; board swinging window-shutters, that were occasionally closed, on the windward sides. Heat not regulated. Time of feeding, May and June.

3. Have never fed in an open shed.

4th. I greatly prefer the peanut variety, as producing most silk; am also partial to the two-crop white.

5th. In the above crop, I used the white Italian mulberry.

6th. I think early feeding more congenial with the nature of the worm than late. Dame Nature is our best guide.

7th. I believe that failures often arise from endeavoring to raise too many worms in the same building; and, also, from not giving them *proper* food, at *proper* times.

8th. I have never tested the mulberry leaf for paper.

9th. Have had no experience.

10th. As you invite suggestions on the subject generally, you will excuse me if I presume to offer one, which strikes me as being very pernicious to the well-being and final success of this interesting little animal. I refer most particularly to noises of any kind in the cocoonery; and at any time, but more particularly at the time of moulting. The sound of a hammer, a sudden burst of laughter, or even loud talking, disturbs them. Their food also is often *thrown* on them, instead of being laid down gently by them. Anything which causes them to start, and more particularly in their *torpid* state, must of course derange the order and process of nature, &c. &c. The minutiæ of their brief existence cannot be entered into here. I will only say, that I learned the feeding process from Italians, and that as much caution was observed in entering the building, and approaching the worms, as we use in visiting the cradle of a sick infant at the crisis of some dangerous disease.

In the manufacturing department I can say but little; but, as drops of water form the ocean, so my mite may assist in swelling the mass of information you may wish to compile.

1st. In 1824, I spun on a flax wheel, from the pierced cocoons, a sufficient quantity to make several pair of stockings, gloves, &c. One pair of the stockings I yet have, which at that time created quite a sensation. I have been more or less engaged in it ever since, as time or circumstances would permit, but only for amusement; never as a business till the year 1841. In 1840, I was awarded a silver medal by the Franklin Institute in Philadelphia, for reeled silk, with which I had amused myself in my private room, without the remotest thought at *the time*, that it would ever meet the *public eye*.

2d. My manufacture has been confined thus far to sewings, saddler's floss, stockings, and broad silks.

3d. In the past two years and two months, I have reeled 483 lbs. of raw silk, made 336 lbs. of sewings, &c., about two dozen pairs of stockings, and 110 yards of broad silk, both plain and twilled, for dresses. I have clad myself in a suit of domestic silk, from head to foot, entire, every article of which has been reeled in my filature. I also received the award of a second silver medal from the Franklin Institute, at their last exhibition, for my sewing silk, which, together with a less quantity of raw silk, I furnished them, amounted to 94 lbs.

4th. As to capital invested, please accept *the truth*, which is easier told than a fabrication. I rented the building I now occupy, borrowed my machinery, which was sent me free of cost, and commenced business *without a dollar*. When the cocoons which offered were reeled, I took as my fee a portion of the silk, made the whole up into sewings, &c., for which I have found ready sale, and paid over to the owners the highest market price for *their* portion. The first year I paid $5.50 per lb., last year $5, but this year I am in a fair way of having little to buy or sell.

5th. I employ two hands to each reel, one yonng woman and one child, all females; sometimes supernumeraries to the number of ten and twelve.

6th. As to the quality of American raw silk, compared with foreign, I have little experience, except with my own, which I know has continued to command the highest market price, and generally, indeed I may say always, from fifty cents to a dollar more per pound than the foreign. I would also observe, that foreign manufacturers here, who have worked silk reeled in my filature, have given it a decided preference. A sample of reeled silks and sewings, which I sent to the National Gallery at Washington last year, has been complimented as being equal to any in the world. While on the subject of reeling, perhaps I will be excusable for mentioning, what to me often proves a source of deep regret; I mean the inexperience of those in different sections of our country who reel their own silk, without knowing the necessity of its being done in a particular manner to suit the manufacturer. Lots of silk are frequently offered for sale, which, to look at, appear perfectly good; but upon examination, are not saleable at any price, because they cannot be worked. Hence another cause of discouragement to the grower.

7th. In regard to the best tree for feeding, I prefer the white Italian; I think the silk stronger, and susceptible of higher lustre; and would recommend in all cases of multicaulis feeding, where practicable, that the white Italian should be substituted from the last moulting to the finishing. The other varieties I am not acquainted with.

8th. In the tariff, the act appears ambiguous: "On sewing silk, a duty of two dollars per lb." "On raw silk, comprehending *all* silks in the gum, fifty cents per lb." It is currently understood, but I am unable to say with what correctness, that sewings are imported in the gum at 50 cents per lb. If so, the duty of $2.50 per lb. is more or less defeated. Foreign sewings include generally from two to three ounces artificial weight in the pound of thirteen ounces, or about 20 per cent. illegal profit. The American manufacturer, even if so disposed, is unable to compete with this fraud, on account of the small quantity dyed at the same time. Foreign sewings are made from second and third quality silk, first quality being manufactured into fine fabrics. American sewings are made from the first quality of raw silk, and are admitted to be much stronger and better; and being new is also an additional advantage. Under all these circumstances, the American sewings cannot successfully compete with foreign. There is a VERY STRONG disposition in consumers to encourage American silk, but as the foreign answers their purpose, the difference in price overcomes their patriotism. I am decidedly of opinion, however, that American sewings would succeed under a revision of the tariff, the present tariff being defeated by the management of the foreign importer.

9th. As to the enterprise being feasible, I can see nothing to prevent it. Our climate has been sufficiently tested to prove that it can be *done*. That the climate south of the parallel of 40 deg. is more congenial to the worm we may admit, having little need of artificial heat; but if good cocoons can be grown in the northern part of the State of New-York, why not in any part of our Union? Our population want LEADING on by State bounties, and a protective tariff *on silk* (that cannot be evaded,) until by their experience they become skilled in raising the worm; and my humble opinion is, that a crop of silk will become as much a matter of course with farmers generally, as is their present crop of wheat or corn.

In conclusion, I may say, that having extended my brief epistle to almost a volume, it can scarcely be necessary for me (if even admissible for ladies,) to make my courtesy at your convention, clad in my domestic silk.

ALEXANDER SMITH, *Fredonia, Chautauque Co., N. Y.*—I have been engaged for the last six years in the culture and manufacture of silk. I feel a deep interest in the success of the enterprise, and having been one of the first to engage in it in this county, have watched its progress with solicitude, and am much gratified to see it steadily advancing. There have been about 13 or 14 hundred pounds of cocoons raised this year in the six towns along the lake shore, which is probably three times the quantity ever raised before in one year. Several gentlemen are preparing to feed largely next year, and many others are making preparations to begin next spring. From my own experience I am convinced that the soil and climate, in the northern part of this county, is well adapted to the culture of silk. The southern and middle parts I do not think so good, owing to their elevation, and more sudden changes of temperature. I have come to the conclusion, that silk can be profitably raised in any district where Indian corn is cultivated to advantage, as the season which suits one, is perfectly adapted to the other.

The worms fed in this vicinity the two years preceding this were very sickly, owing I believe, principally to want of leaves, and want of skill in those who fed. This year they have been remarkably healthy, with some very few slight exceptions. The cocoons raised here are all made into sewings; none have ever been sold out of the county to my knowledge. I have manufactured probably two thirds of the cocoons raised in the county for the last four years, and many from Pennsylvania. I have a reel, twisting machine, and spooling frame, all of my own invention, and all work admirably. The reel can be made for six dollars, and for simplicity, durability, and facility of reeling, I think has not been exceeded.

My twisting machine may be made to drive any number of spindles. It may be turned by hand or by water. It twists a smooth, even thread, is very simple in its structure, and is not liable to get out of repair.

The twist may be regulated so as to twist hard or slack, as the operator pleases. They can be built with 12 spindles for $25. The spooling frame is equally simple, cheap, and convenient. I pay from four to five dollars per bushel for cocoons, according to quality, and my silk sells readily for four dollars per hundred skeins. There is another gentlemen in this county who has a machine of 3 spindles, with ring-fliers, but he works only his own cocoons. Thus I have given a very brief statement of the silk culture in this county.

The amount of cocoons above stated has been raised in the six towns, along the lake shore.

There are probably two or three hundred pounds grown in other parts of the county.

L. B. HEWINS, *Foxborough, Mass.*—I am very much gratified to know that you are making exertions to forward the silk business in the United States. But as we have worked on a very small scale, raising a few worms and working what cocoons are raised in this vicinity, perhaps I can be of no great service to you, but will answer your inquiries as well as I can.

I have raised a few worms each year for 4 years, with good success in general. Fed them in a room 14′ feet square, plastered. Did not regulate the temperature in any way. I have not fed in an open shed, but the general opinion here is that this is the best. We prefer the peanut worm as they reel more readily than any other. We use the Italian, white and multicaulis, and let them stand through the winter without injury, if planted on dry land.

We have tried early and late feeding, and found early feeding much the best, as the worms do better and make much heavier cocoons.

Great care should be taken to procure eggs from healthy worms, and then, with a little experience, we may secure a good crop: but with bad eggs, or those from feeble or sickly worms, we shall certainly lose our labor.

We have been engaged in the manufacture about five years, most of the time making mostly sewings. Have made some warps for weaving bonnet edgings. Last year we received the bounty from the State on 15½ lbs. of reeled silk which we made into sewings.

Have not much capital invested for machinery, say $100 for reeling and twisting, which by the way I invented and got up myself. We employ no hands out of our own family, and only two of us work at this business.

Have worked some imported raw silk which was not worth so much by 25 per cent as our own, owing to its not being reeled well, i. e. was not worth so much by $1 per lb., which would pay for the reeling.

I know of no difference in the silk made from the different kinds of mulberry.

And in conclusion, we have planted the trees, fed the worms, reeled and twisted the silk, and finished it ready for the market, and know of no possible reason why the business is not practicable and profitable in all its parts.

I would ask for information respecting weighing sewing silk. Does any one know how to weigh it as the imported is weighed?

We weigh ours, but presume not in the right way.

I send you a specimen of sewing silk reeled on my reel, and doubled and twisted on my twister, which does the doubling and twisting at one operation.

[The enclosed silk bears testimony of the excellence of the machinery, and the skill of the operator. J. R. B.]

Z. STORRS & SON, *Mansfield Centre, Conn.*—I had intended to meet the Silk Convention in New-York, but as I cannot do that, I am desirous to add my mite to the mass of information which will be collected. I have been for forty or fifty years conversant with the growing of silk in this town, though not personally engaged in the business. I consider it feasible and simple in the whole process, and that a little practical knowledge will convince any one of this fact, and that the generality of publications on this subject, have invested it with too much mystery.

I have been now for about ten years engaged, in a moderate way, in the manufacture of sewing silk and twist—have about three hundred spindles and winders propelled by water power, and employ in the mill from 10 to 14 hands, according to their experience and skill in the business, and produce from 25 to 40 lbs. per week—using from one to two thousand pounds of raw silk yearly, adapting it to the demand. The capital necessary for this I find to be about $8,000.

We have used various kinds of raw silk, and I can say without hesitation, that the American, properly reeled, is equal to any—and I do not think, at least I could never discover, much difference whether made from the multicaulis, Alpine, or white mulberry. I think the present tariff on silk needs some alteration, in the law or the construction, to prevent the importation of thrown silk at the same duty as raw silk.

As to the ultimate success of the silk business in this country, both in growing and manufacturing, I have no doubt on the subject, but think the growing of silk may and will yield more profit than the present production of cotton.

I have written in great haste and should be glad to enter more at large on this important subject, had I time. Shall always be glad to hear from you and shall be ready to give any information in my power.

NATHANIEL J. CHURCH, *Minisink*, *Orange Co.*, *N. Y.*—1. I first commenced feeding silk-worms in this town, July, 1839—they were from eggs obtained from Prince & Sons, N. Y., by a gentleman in this vicinity, in the multicaulis speculation. The worms were nearly half grown when obtained, and had been fed very irregularly. I fed them on white mulberry leaves, and of some thousand but few finished their cocoons,—I saved eggs from the best. In 1840, fed a lot principally on the white mulbery, till my leaves began to fail, and then resorted to wild leaves; I also had a few multicaulis. The worms did well till near maturity, when all at once they became diseased, and notwithstanding every effort to keep them well fed, cleansed, and separated, I lost probably three-fourths of all I had. Not willing to give up, I saved, as before, the best cocoons for eggs, and kept them over as directed in the Silk Grower; and, in 1841, having both the white mulberry and multicaulis leaves in abundance, and some little experience, I brought forward my first crop 11th June, and with some little management and care, succeeded in bringing my worms to maturity—but few were diseased—I had 38 lbs. cocoons. Encouraged by this, and finding I could reel them, I made preparation for a more extended crop in 1842, and though my second crop was not so promising as I had anticipated, still I prepared for two crops again, and in June, 1842, brought forward my first crop, which hatched the 14th day. I then brought out my second crop, which hatched in four days—thus my first and second crops were nearly together. I succeeded very well with them till they were about two-thirds grown, when it commenced rainy weather, which continued without much cessation for several weeks. Notwithstanding this, by the use of air-slaked lime, and through persevering effort, they were carried through, but it was very evident they suffered severely. I had 119 lbs. cocoons. I had the first and second crops so near together as to interfere materially; the latter, however, were far inferior to the first. Eggs saved as before, and the past season, 1843, has been much more favorable, though in consequence of the drought the leaves were small. Still the worms were healthy, and the cocoons sound. The first crop was brought out several days sooner, and the second did not interfere with the first. Both families of worms did well, but the early crop was far superior to the other. The last crop hatched 4th of July, and wound in six weeks. I did not feed at night, but regularly in the day time.

2. I fed in my house and barn, and the temperature was regulated in no way, except by opening the doors and windows, as the case seemed to require.

3. I have not fed in an open shed or tent.

4. I have tried several kinds of silk-worm and give a preference to the small white peanut, principally because I have observed it to wind off much easier than any of the others.

5. I have about two acres of trees, *one* of white and *one* of multicaulis and a few hundred Alpines. They are rather carelessly managed at present.

6th question is partially answered above. I fed some as late as September and October, but though they were fed night and day, they were nearly eight weeks before coming to the conclusion to stop eating.

7. The cause of bad success in feeding in this neighborhood, may principally be traced to want of cleanliness, huddling too many together, and irregularity in feeding. I once injured my own crop by suddenly changing from the multicaulis to the wild mulberry leaf, when they had fasted for some hours. In regard to the other questions, my experience is quite limited. The past season I had 103 lbs. of cocoons. My help consisted principally of small boys and girls, who gathered leaves and fed the worms—the expense was next to nothing. In manufacturing the cocoons into sewing silk we have not hired any help. I made my own reels, and with my wife's assistance, we have reeled, spooled, doubled and twisted, and skeined, colored, and finished, and sold the past season, and received to the amount of $113.50. The expense of our reel and spools, and skeining, I suppose might be $3, having made them principally myself,

and our old spinning-wheel we had before. I find more difficulty in *coloring* than in anything else, having *all* to learn by experience—books are of little service to me, as their process is generally on a large scale, and the articles used not easily understood. However, as I am not easily discouraged, I think all these difficulties will be at last overcome. I mean to attend the convention, and bring some silk along—not because I expect it will be of much use to others, but I wish to learn. I am fully satisfied that the business is not only practicable, but that it will well remunerate and justify any capital that may be judiciously employed. If our county agricultural societies would appoint special committees in each county to collect information and lay it before the public, offering a small premium, many would be induced to make experiments and bring in the result. A spirit of enterprise and competition would soon follow, and much good evidently be the consequence.

W. Adams, *Northampton, Mass.*—On behalf of the Northampton Association of Education and Industry, I beg to acknowledge the receipt of the Silk Circular, issued by the officers of the American Institute; and in reply to the questions annexed to it, I have the pleasure to append such information as the experience of the Association supplies, embracing a brief statement of the results of silk growing during the past season.

The Association which was established in 1842, on the principle of a community of interests among the members, purchased the estate formerly belonging to the Northampton Silk Manufacturing Company, including between twenty and thirty acres of mulberry trees, the cultivation of which had been long neglected. In the spring of the present year the Association built a cocoonery and commenced the culture of five acres of trees, by cropping, ploughing and hoeing, and the foliage produced was in consequence very greatly increased, and the result of feeding highly satisfactory.

The building erected is a frame, covered and shingled, without any floor. The sills are raised by underpinning the posts, and with a view to thorough ventilation, a large number of the boards are secured in such a manner, as to swing back like doors; several scuttles in the roof also assist the free circulation of the air. The building is 100 by 25 feet, with two tiers of frames the whole length, on which the worms are fed.

The following is a brief view of the value of the capital invested, and of the results of the present season in this department of industry:—

Capital Invested.

Cost of cocoonery,	$200 00
5 acres of land, at $50 per acre,	250 00
Capital invested,	$450 00

Debts.

To 8 ounces of seed, hatched for feeding, at $3 per oz.,	$24 00
To 105 days' labor of men and boys, averaging 75 cents,	78 75
To rent of cocoonery, at 10 per cent. on cost,	20 00
To rent of land, at 6 per cent on valuation,	21 00
To reeling 44 lbs. silk, at 75 cts. per lb.,	32 00
Debts,	$175 75

Credits.

By 44 lbs. silk, at $5 per lb.,	$220 00
By 40 oz. seed eggs, at $3 per oz.,	120 00
By half a bushel of cocoons, sold for seed, at $7,	3 50
By 4 bushels of perforated cocoons, at 50 cents,	2 00
Credits,	$345 50
Debts,	175 75
Nett profits, at 37½ per cent,	$169 75

Referring to your Circular for the two series of questions you propose on the subject of the growth and manufacture of silk, I now subjoin answers numbered in conformity with your questions:—

Growth of Silk.

1. We have fed worms two seasons. Last year we did not produce so much silk as we have this year, but the results were in about the same proportion.

2. The building has been described above. The temperature is not regulated by any artificial means whatever.

3. We made an experiment during the past season of feeding in an open shed or tent. The results were not favorable, but under the actual circumstances we did not consider the experiment decisive against that mode of feeding.

4. We prefer the peanut variety of silk-worm to any other.

5. We feed from the Alpine variety of mulberry, and we plough and hoe them.

6. Our experience is in favor of early feeding.

7. We are not acquainted with any cases of failure in feeding.

8. We have made no experiment in the manufacture of paper from the mulberry leaf, either in the green or dry state.

9. We have not attempted by water or dew-rotting to convert the bark of the mulberry shoots into paper or silk fabrics.

Manufacture of Silk.

1. We have been engaged in manufacturing silk eighteen months.

2. We manufacture all the varieties of sewing silk and twist.

3. We manufacture at the rate of twelve to fifteen hundred pounds weight annually.

4. The amount of capital invested in the manufacture is about $3,500.

5. In the manufacture, which includes dyeing, we employ three men, eight girls and three youths, of eighteen years and under.

6. American raw silk, properly reeled, is decidedly superior to the foreign article for manufacturing purposes.

7. We have no practical knowledge of the *comparative* quality of silk made from the different kinds of trees in common use in this country.

8. So far as the present tariff has been tested, it does not appear to have operated in a manner favorable to the silk manufacture. What modifications are needed, is a question which I am not prepared to answer. Whether any protective tariff for silk is needed, or is just and proper, is another question, which you have not asked, and which I do not answer. But however this question may be answered, I am inclined to believe that the Northampton Association can compete successfully, both in price and quality, with the best foreign manufactured sewing silk usually imported.

9. I have no doubt that both the growth and manufacture of silk are destined to be permanent and extensive branches of American industry, but in these as in every department of labor, prudence, judgment, economy and order are indispensable to success. The great defect of American raw silk is, that it is badly reeled, and it is in consequence, unfit to be employed for the production of a good manufactured article. The cause of the bad reeling is to be found in the simple fact, that it is reeled in the families where the worms are fed, and the cocoons produced. It is probable that there are circumstances which will always prevent silk that is reeled in families, from being well reeled. But even if in every individual instance properly reeled, the silk in one family will be reeled with a different degree of care, and of a different degree of fineness from the silk of most other families, and when the manufacturer purchases American raw silk in considerable quantity for manufacture, he finds himself in possession not of one uniform kind and quality of silk adapted to his purpose, but of numerous varieties from very coarse to very fine, from very even to very uneven, each variety in small quantity, thus presenting an insuperable obstacle to the production of a good manufactured article from such stock. The remedy of the evil is as simple as the cause. Raw silk must be reeled only in large quantities of a uniform quality and fineness, in order to be employed in manufactures. This is equivalent to saying that it should not be reeled in families where only small quantities can be produced. The proper business of families, and the *only* business adapted to them in the silk culture, is the feeding of the worms and the production of the cocoons. This is all that is done by private families in Italy and India—large silk growing countries—and is all that can be done by private families in America with advantage, if we desire to make this country a large silk growing and silk manufacturing country, and until the necessity of this division of labor is perceived, and family reeling discontinued, American raw silk will never acquire a high character generally, nor will the American silk manufacture from native produce, ever rest on a secure foundation. The North-

ampton Association has in consequence resolved never to purchase American raw silk, except under very peculiar circumstances, but only cocoons, and those of a good quality, for which they will always be ready to give a fair and reasonable price.

I have now only to add that a large proportion of the silk grown by the Northampton Association during the past season, and carried through every process, from the hatching of the eggs to its entire completion in the manufactured state, will be presented for exhibition at the Sixteenth Annual Fair of the American Institute.

Rixford & Dimock, *Mansfield Centre Ct.*—We send you the following statement:

(1.) We commenced manufacturing silk in 1839, and have been engaged in it ever since, being about four years.

(2.) We have manufactured sewing silk and cord, chiefly sewings.

(3.) The quantity of raw material used by us would average twenty-five pounds per week, and the cost would average $4 .50 per lb.

(4.) Amount of capital invested in the business would not exceed four thousand dollars.

(5.) We have employed about nine hands to turn out this amount of silk per week.

(6.) We have manufactured about all kinds of raw silk, and we find that American silk, reeled as it ought to be, exceeds any other for strength and durability.

(7.) It is our opinion that silk made from the white mulberry exceeds any other kind. We have manufactured silk made from the Alpine, and from the multicaulis, and if we could get such as we have manufactured from the Alpine, we would be satisfied.

Our views with regard to the silk business in this country are, most clearly, that it will succeed. The time is not far distant when we, as a country, shall raise our own silk, and manufacture it; and ultimately compete with foreign nations.

Moses R. King, *Newark, N. J.*—From an investigation of those manufactories similar to my own, in this city, it is believed that the amount of silk consumed annually, will not vary far from 500 lbs. This is used in making coach lace, fringe, tassels, and gimps, and is composed of those kinds of silk known as tram and organzine. In these manufactures we use other materials besides silk.

My opinion as regards the quality of American silk is that, if well reeled, it is equal, if not superior to the foreign article. The American sewings, we consider far more desirable for our business than the imported. As a consequence, we have for the last two years purchased that, when we could find it in the market. The tram and organzine, commonly called floss silk, we have found more difficult to get, of such quality as to meet our wants. This has no doubt been caused by the inexperience of those engaged in its manufacture. We frequently find it filled with burs, and its color often presenting different shades of whiteness. This appears to result from want of care, or a want of the proper knowledge of the business, and, of course, is a difficulty which time will overcome. We feel assured of this, as we have purchased some beautiful lots of American floss which have fully met our desires.

Permit me to add, that I am rejoiced to find the subject of silk culture and manufacture, receiving increased attention. Since its first introduction into our country, my faith in its ultimate success, complete and entire, has not wavered. I early became satisfied that we were paying into the hands of foreigners a large amount of money annually, which could and ought to be paid to our citizens. So great has been my desire to encourage it, that I have not unfiequently purchased the American article of floss, when it had to be used to some disadvantage. I wish you great success in your attempt to excite the public attention to this important and highly interesting subject.

ISAAC E. JONES, *Richmond, Ind.*—I accidentally, a few days since, saw one of your Silk Circulars, and perused it with much interest, and being in a small way engaged in both the growing and manufacturing of silk, and feeling much anxiety for its progress and encouragement in the United States, I felt willing to cast my mite into the treasury. I should not, however, have attempted it but for the observations in the last paragraph of your Circular.

Answers on growing silk.

1. We have fed more or less three years past, and feel stimulated to persevere in the business.
2. We occupy the upper story of our factory to feed in, and use Tillinghast's suspended frames.
3. We have never fed in an open shed or tent—the temperature ought to be uniform—70 to 80.
4. We prefer the mammoth sulphur variety, both for the grower and manufacturer.
5. We use the multicaulis entirely, and plant in large rows four feet apart, cut 12 to 15 inches high. Feed branches.
6. We have tried both, and believe early and midsummer feeding best.
7. We think bad success in feeding is mostly owing to bad stock and want of ventilation.
8. We have not, but intend to try it this fall.
9. We think it may become useful; from a small experiment of water-rotting, the fibres are fine and strong.

Answers on manufacturing.

1. We have been manufacturing 8 or 10 months.
2. We make at present satins, ladies' dress silks, cravats, scarfs, &c., &c., of different colors.

3. We are not yet able to answer this question satisfactorily, perhaps 75 to 100 pounds.

4. We have, including water power, building, machinery, &c., &c., about $4,000.

5. We have, as occasion requires, from 5 to 8 males, females, and children.

6. We are of the opinion fully, that American raw silk well reeled, is equal if not superior to most foreign silk.

7. We think silk made from the multicaulis better than any of the other varieties.

8. We think the present tariff should be increased and continue a few years at least.

9. We think, if properly protected by government, the silk enterprise is entirely feasible, strict economy being observed.

I am glad to find so warm an interest now manifested on the silk subject. I am very desirous to hear something about French's Knitting Loom. I have seen it very highly spoken of in the New-York Tribune. I think one of them would be a useful acquisition to our silk establishment if it merits one-half that is said about it. I think such a machine would be useful in working up the more inferior quality of silk as well as the best. The people here are turning their attention to the silk subject in earnest. I think our city and vicinity have raised 12 to 1,500 lbs. of cocoons this season. All were not successful owing to bad stock, but we are prepared with the best kinds for next year. I should admire to be with you in convention, if it were possible.

Capt. JOSEPH CONANT, *Northampton*, *Mass.*—Your favor is before me. Pressing avocations leave me time, at present, only to answer your queries very briefly.

(1.) Your *first* question—How long have you been acquainted with growing silk? I answer, that I was born in Mansfield, Conn., and have been more or less actively engaged in the business nearly 46 years.

(2.) As to buildings, I have fed in about everything bearing the name—barns, corn-houses, and other *open buildings*, with usual good success. But I have no records and can give no statistics.

(3.) Have never fed in a *shed* or *tent*, so called, but have done what amounts to the same thing, and beyond all doubt, this is the true system. The pure air of heaven is indispensable, and the feeder can get it in any way he pleases, but *get it he must*.

(4.) I have generally used the large sulphur worm, but recently the peanut, which I prefer.

(5.) As to trees. I have generally used the white mulberry—the only kind known in Mansfield or the country, during the years in which I did the most feeding.

(6.) Prefer early feeding decidely.

(7.) The causes of bad success are several—bad eggs, or good eggs badly managed, insufficient or unsuitable food, &c. But the *one great cause* has been *inadequate ventilation*.

As to the mulberry leaf for paper, or the bark for purposes specified in the Circular, I have made no experiments.

In regard to manufacturing silk, I would remark:

(1.) I have been acquainted with the business as carried on in Mansfield, in a domestic way, from a child. In 1829 myself and another man commenced manufacturing sewings by machinery in Mansfield, which was, I believe, the first attempt in this country in that way; and I have been engaged in the business ever since.

(2.) I have made sewings, twist, some ladies' dresses, vestings and handkerchiefs.

(3.) Have used from one to four thousand pounds of raw silk annually, chiefly for sewings, and at a cost varying from $3.50 to $6.00 per lb.

(4.) Have now from $3,000 to $4,000 invested in buildings, &c., connected with the business.

(5.) Employ 10 to 12 hands, male and female, chiefly females.

(6.) I have no hestitation in saying as a manufacturer that American silk, properly reeled, is equal to any in the known world. For strength and lustre, it is superior to any foreign silk I have ever seen.

(7.) As to silk made from the white mulberry, multicaulis, Canton, Asiatic and Alpine, I know of no difference.

(8.) In regard to the present tariff, I concur entirely in the views expressed by Mr. Murray and other manufacturers, now before the convention.

(9.) "What do you think of the whole silk business, as a business of this country?" This question I cannot at present answer as I wish. I will however say, in brief, that I feel entire confidence in the opinion, that it will ultimately become an important branch of business, employing an amount of industry, and diffusing wealth to an extent scarcely equalled by any other. Had I time, I could give you many good and sufficient reasons for the opinion here expressed.

John Fox, Senior, *Mt. Pleasant*, *Jefferson Co.*, *Ohio.*—I will answer your nine interrogatories as concisely as possible.

1. I have been wholly in the manufacture of silk, 35 years in London and 10 years in America. I was born in London; my predecessors were weavers of the old school. I was brought up to the business young, and never went out of it. While engaged in it in London, I superintended for the following gentlemen:—Messrs. Hopkins & Cowper, Friday-street, Cheapside,—30 looms; Mr. Wm. Prater, Wood-street, Cheapside,—100 looms; Mr. Rugg, Spitalfields,—40 looms; Mr. Frebout, Finsbury,—50 looms: besides being, after that, in business for myself, in Church-street, Spitalfields, and Basinghall Street, City, five years, with twenty looms. During the period of fifteen years, I had from 250 to 300 lbs. of silk of every grade and name, pass through my hands weekly.

2. There is no article of silk goods that I have not manufactured, or caused to be done, during the above forty-five years.

3. During the last sixteen months, 280 lbs. reeled silk.

4. Including factory buildings, machinery, &c., &c., $5,400; expended the last 16 months, for cocoons, reeled silk, weavers, winders, dyeing, and girls employed, $11,371. My son has now 25 hands engaged and constantly employed.

5. My opinion of the American silk, if well prepared, is that it is quite equal to any I have seen in England, from France, Italy, China, or Valencia, and in some qualities superior.

7. I would give the preference to an orchard of white Italian varieties, believing them to possess medicinal as well as nutritive properties.

8. I do not consider the protective tariff as answering the end for which it was intended, and very little good will be effected by it, unless it is ad valorem as well as specific. But as Mr. G. has expatiated upon this topic so ably, I shall say no more.

9. I have no more doubt of the ultimate success of the silk business in this country, than I have of my own existence.

Thus far I have answered the questions proposed, as far as my knowledge extends. I am happy to say the Richmond (Indiana) Silk Factory is in the hands of my two sons on their own responsibility, who are progressing as well as can be expected.

I will now close with a few remarks of some importance. It is evident from the greatly increased quantity of cocoons raised this year, that something must be done to provide reeling establishments, and that quickly; otherwise there must be a decline. I would suggest that filatures be established in several parts of every silk raising State, that the raisers may have a market at a convenient distance to resort to with their cocoons. My son that is with Mr. Gill, has purchased for him upwards of 500 bushels of this year's crop, and I am satisfied not half has come in yet. The distance they have come has in some instances much injured the cocoons. The expense to establish these filatures would be trifling, compared to the convenience, safety, and cheapness of transporting the silk. I hope some of my highly esteemed friends far east, will give the subject that consideration it merits. But the most effectual means for working up the raw material is to establish silk factories. This would be an honor to the Union, and evince the patriotic sentiments of its citizens, and within five years bring in a lucrative return for their investments. When I look back only six or seven years, there was not the semblance of a silk factory in the west. Now what a change! We see them at Mount Pleasant, Ohio—at Richmond, Ind.—at Nashville, Tenn.—and at Economy, Penn, and elsewhere, in a smaller way. Dr. White, Mr. Gill, myself and three sons, were the only individuals engaged in the cause. We pioneered our way through evil report and through good report. The public looked upon us either as maniacs or designing men. The latter was the fact; for we designed to save twenty millions per annum from being foolishly sent away from these shores. We have partially succeeded; and all that is wanting to complete our designs fully, is men of the same liberal and patriotic principles as Mr. G. I am aware that able and disinterested superintendents are scarce, as a superintendent must not only be a good silk weaver, but a manufacturer, or at least one that has had the superintendence of an establishment in Europe; and I should find no difficulty in getting such men, provided there was a probability of permanent employment.

I am happy to say there is every prospect of three more establishments being raised next April; one in Cincinnati, one in Kingscourt, Tenn., and one in Indiana, Pa. I hope to hear of Connecticut, Massachusetts, &c., doing likewise. Commence economically; go on with spirit, blended with prudence and perseverance, and success will be the happy result.

Murray & Ryle, *Proprietors of the Paterson Silk Manufactory, Paterson, N. J.*—The Circular of the American Institute has received our respectful attention, and we take great pleasure in furnishing replies to the inquiries addressed to manufacturers of silk, viz:

1. Our establishment was commenced in the summer of 1840.

2. The varieties of silk we manufacture are chiefly sewings, tram, organzine, twists of various descriptions, and in fact every kind of silk thread. We have lately commenced the weaving of cloth, and have now 12 looms in operation. Specimens of these articles will be exhibited at the Fair.

3. Our consumption of raw silk is at present at the rate of 8,000 lbs. per annum.

4. The capital employed is about $20,000.

5. The number of hands employed is about 50, chiefly women and children.

6. American silk, when reeled with care, produces a stronger thread than silk of foreign growth, and we give it the preference in every instance when offered us for sale.

7. We have not had sufficient experience in the qualities of American silk made from different trees, to answer this question. In order to arrive at any correct conclusion on the subject, it would be necessary for the grower of each lot of silk to specify upon what kind of mulberry he fed his worms.

8. In answer to this question, we would state that the present tariff on silks does *not* answer the objects contemplated in making it—which we presume were, encouragement of the growth and manufacture of silk, as well as revenue. The section of the tariff on raw silk reads thus:

"On raw silk, comprehending all silks in the gum, whether in hanks, reeled or otherwise—50 cents per pound of 16 oz.

Now, raw silk is known in common acceptation, as the silk simply reeled from the cocoon and made up in hanks for the manufacturer. But, under the clause "or otherwise," silk in the gum, although *manufactured through all the incipient stages, previously to the operation of dyeing* (in which the natural gum is for the first time extracted,) is admitted at the same duty of 50 cents per pound.

The importer of silk in this stage of manufacture, when a purchaser calls for a particular color, has only to send the quantity required to a dyer, who colors and prepares it to order at small expense, and returns it to the importer in that fully finished and manufactured state which, if so imported in, would pay a duty of $2.50 per pound; and thus, by this defect in the law, it is evident that government loses $2 per pound revenue, and our home industry is deprived of the manufacture, which the law gives to the pauper labor of Europe.

During the last session of Congress, and prior to the passing of the present act, the bearing and probable effects of the section relative to the duty on raw silk, as now worded, was fully and strongly represented by ourselves and others, manufacturers and growers, to the committee on manufactures and to the comptroller of the United States. These representations were received in such a way as to favor the expectation that the section would be so modified as to secure all the objects of the law; another of which was, to insure to the grower of silk, a home market for the produce of his labor. And we would here ask where is the silk grower to find a home market, if not from the home manufacturer? And how is the manufacturer to succeed, if the manufactured article is admitted *at the same duty as the raw material!*

The act was passed without any modification of the section, thus showing that foreign cunning and ingenuity had prevailed over the interests of both silk grower and manufacturer—for to no other influence can this extraordinary proceeding be attributed.

Inasmuch as the silk grower will be burthened in foreign markets with heavy, if not entirely prohibitory duties and charges, and can therefore expect to find a profitable market only at home, and as the consumption and demand can only be increased by encouragement to the manufacturer, it behooves them both, as well as *all the friends of home trade*, to use every exertion and influence to have the present tariff so amended as to impose a proper duty on silk manufactured in any way, or to any extent, and also a proper duty upon silk simply reeled from the cocoon and put up in hanks.

9th. Our experience has proved to us that it only requires *fostering laws* from government, largely and rapidly to increase the manufacture, and to render the growth of silk universal, and a most profitable branch of domestic industry, inasmuch as its cultivation scarcely interferes with other agricultural labors, only the aged and the young of either sex being required to superintend the raising and feeding of this invaluable insect. We believe this business is destined shortly to add *millions upon millions* to our national treasures. The enterprise is a *mighty one in prospect*, and all our legislators should look to its interests.

We presume the foregoing will serve as an answer to the Circular of the American Institute.

One, if not both of us, will attend the convention to give any further information in our power; and for the sake of elucidating our remarks on this unjust law of Congress, will exhibit to the members of the convention, silk in the gum, raw, and in its various stages of manufacture, before going into the hands of the dyer.

Wm. A. Haynes, *Secretary of the Nashville Silk Manufacturing Co., Nashville, Tenn.*—At a recent meeting of the Tennessee Manufacturing Silk Company, I was instructed by the Board of Directors to make out, and forward to your convention, a statement of the progress of the culture and manufacture of silk in this State.

The history of the culture of silk in Tennessee is a brief one. With the exception of a few families, no attention was given to feeding silk-worms prior to the years 1839 and '40; since that time the culture of silk has rapidly progressed.

In 1840 there were raised in Tennessee 1,237 lbs. of cocoons. Evidence of the rapid increase of the culture, is found in the fact, that 4,500 lbs. of cocoons have been sold in this city during the present year. Not more than half the quantity raised in Middle Tennessee has been brought to this market. From the reports in East and West Tennessee we are satisfied that the production of cocoons in this State the present year does not fall short of 20,000 or 25,000 lbs.

A. D. Carden, agent for the Silk Company, has raised the largest crop of silk-worms in the State, 1,430 lbs. at three feedings, in an *open house*, made for the purpose; on Mr. John W. Gill's system of tent and cradle feeding, (the worms all healthy.)

The farmers are going at it in earnest in this State. The climate and soil are just what the silk-worm wants. Many of our farmers believe they can raise cocoons at one dollar per bushel by this open feeding with cradles, better than they could in the old way at three dollars.

The Silk Co. has engaged a superintendent Mr. Wm. Turner, an experienced silk weaver from London. He has two looms in operation, one weaving satin, (see sample enclosed) from silk grown in this city.

[The sample enclosed is *splendid*. It cannot be excelled in any part of the world. J. R. B.]

Wm. Turner, *Superintendent of the Silk Manufacturing Co., Nashville, Tenn.*—I will confine my remarks to Tennessee silk, not knowing much about silk grown in other parts of the country.

As a manufacturer, therefore, I say unhesitatingly, that Tennessee silk, well reeled, is *decidedly* superior, both for strength and lustre, to any foreign silk I have seen, and is worth 25 per cent over the imported articles of raw silk

As to the quantity now grown in this region, I cannot form a very exact opinion. I will however say, that I feel entire confidence in the opinion that *one hundred hands* could now be employed in its manufacture, diffusing wealth to the State, and that ultimately no other business will equal it.

P. S. Fifty yards of satin, the same as the enclosed, was sold for vesting, by myself from the loom, without the usual dressing with rollers, (that I used in England,) at $3.00 per yard. This was a fair profit on the manufacturing,—and was considered much lower than the imported satin, by those who bought it.

A. D. CARDEN, *Nashville, Tenn.*

[As a further confirmation of the rapid progress of the silk culture in Tennessee, I am permitted to present the following extract from a business letter received by Mr. Gill, while in New-York attending the convention, covering a bill of several shipments of cocoons, amounting to 410 bushels. The letter was written by Mr. A. D. Carden, referred to above, as agent of the Co., and as having himself fed 1,430 lbs. cocoons in open feeding with full success. J. R. B.]

"The above purchases of cocoons exceed the funds placed by you in my hands by $—— and exceed the quantity you authorized me to purchase. There are many more offering in this market for sale, but as you inform me that you have as many as you can reel in your own vicinity, I decline further purchases. I hope you will take these. I hope also by another year, we shall be able to do better in this State, in the way of reeling.

"You will see at the Fair a sample of satin wove by Mr. Turner. We should be very much pleased to have you represent Tennessee, or our infant silk factory, in the convention.

"As you will see eastern manufacturers at the convention, perhaps you can make arrangements to have our surplus cocoons purchased and sent east—any thing you can do to provide a market for our cocoons we shall be thankful for. If the market fails the growers will become discouraged.

"There are three or four times as many cocoons raised in this State this year as ever before, and it is your system of shed and cradle feeding that has done the thing. There can be no doubt, if the market can be continued, they will be increased in quantity and quality. I have saved over 100 ounces of peanut eggs. From this stock the silk growers can take a good start, and raise the very best of cocoons."

[I cut the following scrap from the newspapers, bearing on the same subject. J. R. B.]

GOV. JONES, of Tennessee has been presented with a full suit of domestic silk by the silk growers of that State, in acknowledgement of his efficient services to the cause of American Industry, in his canvass last summer. He responded thus:

NASHVILLE, Oct. 18, 1843.

Gentlemen:—I receive with a very grateful sense of the value of the compliment, the present of a rich and beautiful suit of domestic silk, accompanied by your note of the 14th inst. If anything could heighten the estimation in which I hold this kind and undeserved mark of regard from my personal friends, it is the consideration referred to in your note, that it also proceeds from "the friends and advocates of the culture and home manufacture of silk," and that the suit itself is the produce of this truly interesting and important branch of industry.

I fear, gentlemen, you over-estimate my services, humble and inefficient as I know them to be, in promoting the cause of domestic manufactures. If my ability were equal to the heartfelt interest, which, in common with the great body of my fellow-citizens, I feel in this great cause, I could then flatter myself that your compliment was deserved: in the absence of such ability, I beg to transfer to the truly distinguished and experienced champions of American industry all the credit which your kind partiality would award to my poor services.

Suffer me in, conclusion, gentlemen, to repeat to you, and through you, to the friends you represent, my grateful acknowledgements, with assurances of the warm personal esteem of

Your obedient friend,
JAMES C. JONES.

Messrs. G. W. Martin and others of the committee.

John W. Gill, *Mount Pleasant*, *Jefferson Co.*, *Ohio.*

Questions on growing silk.

Answer to question 1. I have fed worms for 5 years past—results various, owing to the various fixtures used, and experiments tried, attention or neglect of the feeder. *I never had a lot of worms become diseased, or die, if from a healthy stock of well kept eggs, without being able to trace the cause, which was always local, and easily remedied.*

2. I use both one and two story buildings, built of brick and also of wood—have used stoves and also fireplaces with chimneys; prefer fireplaces on account of their drawing off impure air. I think artificial heat beneficial in cold damp weather, especially when worms are spinning. My cocooneries are ventilated by openings, with shutters near the floor, with ventilators from each story through the roof.

3. I have fed in open sheds and tents with *complete success.* I fed this year four several successive crops, and gathered the cocoons from the same cradles. 1st crop fed them in June, last crop in September, both perfectly healthy and made superior cocoons. Scarcely a dead worm, imperfect or double cocoon among them.

4. The salmon peanut is the best, white peanut next; gold peanut 3d; Piedmont, 4th. Mammoth varieties are also good. Have no faith in any two-crop varieties whatever, after 5 years experimenting with all kinds recommended, but would observe that those who wish

eggs to hatch, must select the pure white cocoons from the first lot fed to get millers to lay eggs for the second crop.

5. White mulberry and multicaulis. I cultivate them as I do corn, and replant the multicaulis every 3 years.

6. Previous years my first crops of worms fed early in the season have always been the best. The cause of failure of late fed lots, is in feeding tough, hard, full grown foliage in which there is but little silk gum.

In consequence of the severe drought this season my trees were almost defoliated in August. We then had plentiful rains. The trees threw out an ample supply of young leaves, full of silk gum, and my last lots of worms, fed the last of August and first of September, are equal to any I have ever raised or seen.

7. 1st cause is eggs saved from unhealthy stock. 2d is eggs being improperly preserved. 3d. Irregular feeding and unwholesome food. 4th. Changing the worms while moulting. 5th. And most frequent cause, want of pure air and neglect to remove the excrements immediately from the worms. 6th. Letting the mice eat them during their last age and while they are winding their cocoons.

Questions on manufacturing silk.

1. Between 5 and 6 years.

2. Since we commenced have made almost every variety of staple silk in use, as velvets, satins, 30 varieties of vestings, 20 of dress silks for ladies' wear, hat and coat plushes, broche, lustrings, levantine, serges, florentines, flag silks, stage dresses, umbrella and parasol silks, handkerchiefs, scarfs, cravats, aprons, gloves, socks, stockings, shirts, drawers, sewings, tassels, twist, buttons, &c., &c.

3. About 1,000 bushels cocoons annually.
4. " $10,000.
5. " from 40 to 50 hands.
6. " equal to the best I ever examined.

7. The quality of the silk is owing to the kind of worm that spins it. The quantity may be owing to the kind and quality of foliage fed. Worms fed on the native tree make more floss and less silk than those fed on Italian or multicaulis, but the silk, what there is of it, is as good as from the same worm fed on the other varieties.

8. I think, to protect American labor, there should be a duty on all silks imported by weight, and also say 20 per cent duty on its value in the United States, both on the raw and manufactured article. The duty by weight on the raw article protects the producer, and an ad valorem duty protects the manufacturer. This would prevent the surplus unsaleable silks of Europe from being thrown into our markets and sold here at auction, at any price, having the effect to break down or discourage our citizens from commencing in the business, draining us of our coin, and relieving their own market of goods, the sale of which would conflict with the regular profit on their fashionable and saleable goods. This is necessary to protect this new branch of American industry from being thus assassinated while it is now in its infancy. In a few years it will become full grown, and will supply

us with the best fabrics at the price we now pay for the cast-off foreign stuffs.

9. Is raising sheep in Ohio, hemp in Kentucky or Missouri, or cotton in Mississippi, feasible? If so, the raising of silk in the greater part of the United States is equally so. Disseminate correct information, establish filatures to reel the silk, and protect us from foreign assassination by a judicious tariff, and it will in a few years be the *leading* staple of American production and manufacture, and supply us the means honorably to pay the immense foreign debt we now owe (principally for silks) without repudiating it.

My factory is in full and successful operation, producing more goods that at any time previous. Our operations, as per factory books and account stock, taken August 8th, for the past 16 months, is as follows, in a condensed form, viz.:

Cash value of factory buildings,	$1,340
" " Machinery, engine and permanent fixtures,	4,060
1,067 bushels cocoons purchased,	3,600
280 lbs. reeled silk, do.,	1,400
Contingent expenses, &c.,	604
Wages paid factory hands, &c.,	3,152
Dyeing, dyes, &c.,	607
Wages paid weavers,	1,610
8,000 bushels coal, at 5 cents,	400
	$16,773

In buildings,	$1,340
In machinery, &c.,	4,060
Manufactured 3,731 yards velvets, vestings, dress and other silks, &c.,	6,324
1,006 cravats and handkerchiefs,	1,396
850 pairs gloves and stockings,	875
70 pairs shirts and drawers,	325
10 lbs. sewings,	100
Contingent credits,	1,000
Cocoons reeled and other prepared silk, warps in looms, and other stock, coal, &c., per invoice,	3,180
	$18,600

Since August 8th we have purchased over 500 bushels cocoons. With what we have gathered and now have winding, my crop will exceed 100 bushels.

My first hatchings finished winding 1st July. The last will finish by 1st Oct., being 10 or 12 successive lots between those periods.

I have been successful beyond my most sanguine expectations, in feeding in the shed and ventilating cradles. Have gathered four crops from each, averaging 7 bushels per cradle, or near two bushels at each gathering per cradle. The two first and the last crops were very healthy and made superior cocoons, of large salmon and peanut varieties. The 3d lot was stinted for food, owing to the long drought this summer, which obliged us to resort to the native leaf for about 10 days. They were hard and dry, and injured the lot then feeding very much.

Those fed entirely on shelves nearly all died, and of those in the cradles about one-half, occasioned by starvation. They could not eat these leaves. From middle of August up to date, except three very cold rainy days, the weather has been favorable, with refreshing showers of rain. Foliage came on abundantly and our worms have done well.

I think our cocoons will average 20 oz. silk per bushel. The cost to me this year for producing them will not exceed $2 per bushel.

I am completely satisfied that my system of shed, or tent and cradle, and branch feeding, will produce more cocoons than any other method yet introduced, at half the usual expense, during 3 to 4 months each feeding season. Cold weather in early and late feeding may retard the worms some in eating, and lengthen their time some little in spinning, causing, however, no other injury, and for warm sultry weather, nothing can supersede them; (I find the fans over the cradle entirely unnecessary.) Many others have used them and advised me of their complete success.

There has been a large amount of cocoons raised in the Ohio valley this year, far more than we shall be able to manufacture. I should think, from my correspondence, at least sufficient to keep 200 reels in constant operation. It is of the greatest importance that filatures should be started in various parts of the country, to take in the small lots of cocoons and reel them; and that all large feeders should procure White's compound reel and throstle which prepares organzines, or sewings, or at least should get the common Piedmontese reel, and reel their own cocoons. It would render the crop both safe and profitable, and add much to their profits and the aggregate value of the silk crop. From neglect of this part of the business, I think at least one-third of all previous silk crops have been lost to the producer. The convention, and friends of silk culture, should take this part of the subject under their serious consideration; and by getting the State Legislatures to give liberal bounties for reeling silk, and the convention giving premiums for the best reeled silk, they would soon cause filatures to be established and get the grower to reeling. I do not see why more filatures have not yet been established. The cost to run, say 10 or 20 reels would be small, and the silk could be sold as soon as sent to market. The art of reeling is very simple and easily learned. We have learned probably 50 girls in our establishment, any of whom could reel 2½ to 3 lbs. of fine even silk of 6 to 8 fibres per week, worth $5 per pound. They become expert in a few weeks. Then why is it that after a good lot of cocoons has been raised they are suffered to get old—mice and moth eaten, and finally lost for want of simply reeling them.

Another operation of importance is spinning up the cut-out and imperfect cocoons, floss, and reeler's waste. I have a number of persons employed spinning it at their homes, on the common spinning wheel, and it makes a valuable thread for shirts, stockings, &c., and after paying well for all labor bestowed, netts something considerable for the raw material.

I am pleased with the brightening prospect of the silk culture and manufacture. All elementary questions are now settled by carefully conducted experiments: and the whole country has nothing to do but to go forward with a steady and careful activity, in this new and promising form of home industry,—growing and manufacturing silk.

In reference to future operations, the Trustees of the Institute would give the following notices.

Repository of the American Institute,
New-York, *Nov.* 3*d*, 1843.

The Trustees of the American Institute, in accordance with the resolution of the convention in regard to a *Silk* Manual, as given on page 17 of this Report, would inform the public, that they fully appreciate the importance of this measure, and have engaged J. R. Barbour, Esq., of Oxford, Mass., to prepare such a work. It is designed that it be *plain*, *concise*, *elementary*, and strictly American in its character; and not so large as to exceed *twenty-five cents* in price. Mr. B. hopes to be able to get out the work in about three months.

We also give notice that a medal of the Institute will be given, at the next Annual Fair of the Institute, for the best *experiment* in making paper from the leaf of the *mulberry tree*. The application must be accompanied with a sample of the paper made, together with a full written statement of the quantity made, of the kind and quantity of leaves used, and whether used green or dry, the processes, and all the materials employed in manufacturing, and also the value of such stock, compared with other kinds of stock for paper.

We also give notice that a medal of the Institute will be given at the same time, for the best *experiment* in separating the *inner* bark of the mulberry shoot from the outer bark and wood; either by dew, or water-rotting; or by any other process, by which it may be obtained in a suitable state for paper, or coarse silk goods, or any other valuable use. The applications must be accompanied with a sample of the bark thus produced, together with a written statement of the quantity thus prepared, the kind and age of the shoots used; and all the materials and processes employed in the business.

We also give notice that another silk convention will be called during the next Fair. The trustees, the managers, and all the members of the Institute, as well as the intelligent friends of *home industry* generally, have been exceedingly gratified with the spirit, and the proceedings, and all the results of the convention just closed. We believe this measure has already exerted, and by the publication of this report, will continue to exert, a powerful and healthful influence in behalf of this great business. The facts embodied in this report, in our judgment, are sufficient to settle the whole silk question forever, as a business suited to be a permanent branch of American labor. We regard it as so settled, and in all our future efforts in respect to this subject, shall treat this point as one already disposed of—needing no further proof, and admitting no further doubt.

Another remark. It is intended to make the convention now so happily closed, the beginning of a series of annual conventions, to be continued as long as the interest of the silk business may seem to demand; and to make this report the first of a series of annual reports on this subject, that shall form in the end a vast *repository* of *facts and instruction*, for reference and use in all future times; reports that will be extensively diffused, and carefully preserved, so that when this business comes to stand before the nation, and before the world, as second to no other on the western continent, our children and children's children may here find all the recorded evidences of our struggles and our triumphs.

We wish, therefore, now to shape our measures in reference to this great object. We think it will not be important to publish another volume of letters, *in extenso*, like the present. This will be sufficient for such purposes. It is therefore our purpose now to commence collecting facts on the silk business, in such a form that they can be embodied in *Statistical Tables.* This year we have been happy to receive from one to two hundred letters, and yet not one in twenty of those engaged in the business has written to us. Next year returns will come in by thousands, and we wish to have them come in the form hereafter indicated. To secure this object, we subjoin two *blank schedules*, one for silk growers and the other for silk manufacturers, which they will be able easily to understand and fill up with figures.

In addition to filling the following blanks, we would invite each correspondent to offer any remark or suggestion, or state any discovery or improvement he may have made in any part of the business, or anything that will be of special interest to growers or manufacturers, and all such statements will be preserved in the report.

Another remark. We are very happy to see the public press at the present time ready to publish on silk. We trust they will extract freely from this report, and a copy of it will be sent to any editor, in any part of the country, who shall signify his wish to receive one, by sending a number of his paper to Messrs. Saxton & Miles, New-York, publishers of the report. We wish these notices may be published *entire*, and that silk growers and manufacturers will preserve them, especially the tables, for future use.

We also trust that county, or other local silk conventions will be held next September, throughout the whole country, and that returns will be obtained and forwarded from every grower and manufacturer whether his operations are large or small. We will send a copy of the report, as we do this year, to every person whose name and labors shall help to fill up our proposed statistical tables.

In conclusion, we take the liberty to say, that the trustees and managers of the Institute have no pecuniary interest whatever in the silk business, or in any part of it: that in all these labors to promote that business, we are only carrying out the designs of our asssociation: that these designs are wholly benevolent, and patriotic, having reference to all the great interests of our great country; that our only income is derived from the receipts of the Fair, and the voluntary offerings of a few public spirited men, connected with the Institute and is all expended for public objects. W etrust, therefore, that these statistical facts may be collected, and forwarded to T. B. Wakeman, Esq., secretary of the Institute, free of expense.

SILK MANUFACTURERS.

PRIOR TO 1844.

Names and Post-office Address.	No. of years engaged.	Amount of capital invested.	Amount of American Stock used.	Amount of Foreign stock used.	Total amount used.	Male hands employed.	Females employed.	Children employed.	Lbs. of Sewings & Twist made.	Yds. of Ribbons, Galoon Laces, Cords, &c.	Pairs of Stockings and Gloves.	Yds. of Silk Velvets.	Yds. of other Vestings.	No. of Cravats and Handkerchiefs.	Yds. Hat Plush.	Yds. Ladies' dresses.	Total Value of Goods.
	TABLE FOR 1844.																

SILK GROWERS.

1844.

Names and Post-Office Address.	Years engaged.	Acres of land employed.	No. of Trees.	Whole capital invested.	Amount of cocoons in lbs. prior to 1844.	Amount in 1844.	Cost of the same for 1844.	Value of the same.

APPENDIX.

Communication from D. D. Stebbins, Northampton, Mass.

TO THE TRUSTEES OF THE AMERICAN INSTITUTE:

Gentlemen—It might be amusing to speculate upon the early development, rise and progress, of silk culture, which succeeded the fig leaf and sheep skin clothing of early times; but we have better evidence than the most fanciful imagination can devise.

The most ancient history of the world, has frequent notice of silk and the silk tree; and the most eminent linguists suggest that the Hebrew words "shesh" and "meshi" might be rendered either cotton, fine linen, or silk.

Whether the Jews, at their dispersion, or any other time, carried with them the knowledge of silk culture, or whether it originated with the Chinese, and by stealthy measures introduced into Europe, is not needful for us to contend about. Desirable as it might be to review the past, it would be more pleasing could *we lift the curtain*, and ken what changes will take place within the present century.

Great and important changes have taken place within a few years.

Most of us remember the disastrous tree speculations, succeeded by almost a total apathy in the silk cause, until recently, when public sentiment is waking up, to establish the silk cause on a firm basis.

Within the last year, great and essential improvements have been devised and put in operation by intelligent silk growers, more, it is hoped, for the general good than private emolument.

Among the early pioneers of our country in the silk cause, we hold in grateful recollection the names of a *Styles*, *Aspinwall*, *Clark*, and a few others, who early engaged in the introduction of silk culture into the northern and eastern States, perilling their time and property in the great and good cause in which they were engaged.

The Rev. Dr. Wigglesworth of Cambridge, is recorded to have raised the first silk-worms in New England in 1737. How and where he obtained the eggs is not told us. Between the years 1747–50, the Hon. Jonathan Law, Governor of Connecticut, wore the first silk cravat, and his daughter the first silk gown made of American silk of their raising.

In subsequent years, the culture of silk was attended with good success and profit, until suspended by the operation of the war of the Revolution, during which, and several years after, very little was done in New-England, except in Mansfield and its vicinity.

There was then in existence no general understanding or union about the culture of silk—no patronage of a public institution like that of the American Institute of the present day. The trees then used were of the white mulberry, but within the last ten or fifteen years, other varieties have been introduced, having a larger leaf and equally adapted to the nourishment of the worm. Since the introduction of these varieties, there has been a gradual advance in the propagation of trees and growing silk, until, and in consequence of the disaster of the tree speculation; after which a wanton destruction of the mulberry extended to every part of the country, where they had been introduced.

Now this state of things must be counteracted, and before the country can take the stand in silk culture which would be desirable, or even needful to establish it on a footing which it merits; and would we brighten the chain of union connected with the prosperity and independence of the United States, there must be a rapid reproduction of the mulberry tree. And as there is a great variety, each of which had been extolled by the speculators, even before the respective qualities had been tested, it is of importance to select such variety, as under all circumstances, is most deserving—producing the most nutricious foliage, retaining its verdure in the greatest perfection through the season of feeding, even to the close of the year—for which the worms have a decided preference, producing a rapid growth of the worm and an enlarged cocoon and affording more silk: especially if we are to approximate the mark, which has been set up by a gentleman of high consideration, who has been neither interested in the raising, buying or selling trees: but being an ardent friend of the silk cause, is of opinion that we *can* and *must* raise fifty millions worth of silk per annum in ten years.

As an encouragement to effect that desirable amount, we have the appropriate soil and climate, our habits of industry and mechanical tact, are a sufficient guarantee that we can do much, that we can compete with the *cheap* labor of any country whatever; but to carry out this position the united aid and patronage of both sexes should be put in requisition. The influence of woman has been powerful in church and state—the time was when the *spinning wheel* was an accompaniment for the social circle. Are there not some now living, who in by-gone days, have assisted the ladies in transporting the wheel from house to house, on these social occasions? Indeed, I know of one.

But since the introduction of machinery to take the place of hand labor, the spinning of wool, cotton, and flax, in a domestic way, has become quite unfashionable, even in the most retired districts of the country.

It would be a Herculean task to introduce the manufacture of wool, cotton or flax into the families even of the wilderness, without meeting at the very threshold the objection "that it would cost ten times more to manufacture the article in our houses, than it could be purchased for at the stores." Here the good man of the house is brought to a dead stand with his wife and daughters: who do not take into consideration that *one pound* of silk may be worth one hundred pounds of flax; while the difference in the cost of production is such as to be greatly in favor of the silk crop—almost equal to the difference between one cent and one dollar. The labor required is light and pleasant, and much more profitable than the usual crops; this is confirmed by the returns made to the New-England Silk Convention.

Taking into view the whole circumstance and condition of the country, does not the culture of silk merit the attention of the public, not only as a source of private emolument but of great public utility, to raise and manufacture our own silk as well as wool and cotton? That the culture of silk has been remunerating and profitable, is evident from the great length of time it has been cultivated, and we are not entirely destitute of encouraging evidences at home. As well attested facts are desirable, I venture to mention the following among the testimonials of recent occurrence.

A gentleman of undoubted veracity and high standing, wrote me, in substance, that he had a lot of mulberries, two years old, set upon two acres of land: that the land would not ordinarily yield over 40 bushels of corn to the acre: that he had kept an accurate registry of expenses: that after feeding the worms and reeling the silk, he had a nett profit of *two hundred dollars:* that each tree had yielded him an income equal to that of 30 cents placed at annual interest. This result evidently shows, that there is an intrinsic value in the mulberry tree for growing silk, without taking into consideration the possible value of the after foliage or bark of the trees for important uses, which it is hoped another year's experiments may demonstrate.

Some mulberry trees, when the roots have attained 5 or 6 years, yield abundance of good seed. Several pounds have been saved for future use, and some fine plants from seed sown last spring have been raised, which develop a leaf like the original.

That there is a difference in the quality of foliage for producing silk, results from two experiments which came under my observation—one of which was purposely made by Mr. Theodore Bartlett, of Northampton, to ascertain the difference of quality, if any.

The worms fed were of the same kind and hatching; all fed with equal attention; one parcel was fed exclusively upon the foliage of one variety of mulberry, and the worms were of larger size, and the cocoons adjudged to be one-third larger or heavier than the cocoons made by the worms fed exclusively on the foliage of another variety.

The other experiment was the result, without design, merely to gratify the request of the feeders, because, as they said, they found that the worms were evidently more fond of one kind than the others. In this experiment also the worms were much larger than usual, so much so that visitors said it ought to be made public. The difference of size was so evident, that in another crop I began to feed a parcel of one and the same hatching, *each* upon a *separate* variety of mulberry. The season of the year was too late, and the experiment has not been resumed, having sufficient evidence by the cocoons already made, that there was a manifest difference. The examination was made by a large and respectable number of gentlemen, and the clerk of the court was selected to make the test, who after trying several experiments with the scales, found that five of the cocoons of the worms fed upon one variety of the mulberry, would balance eight cocoons made by worms fed from the other variety of mulberries, which was as 5 to 8 in favor of the mulberry used in both experiments.

There has been some diversity of opinion whether a large number of worms could be fed as profitably as in small parcels. A fact occurred last year in favor of a limited number, where the eggs of 5 millers produced worms to make 2,400 cocoons, which yielded one pound of very superior silk. Those who fed large and crowded parcels did not succeed so well in cocoons or health of the worms; something may be attributed to careless feeding, or neglecting to feed them when it was necessary.

The size and firmness depends very much upon attention and constant feeding, whenever the worm will eat. Such is the result of this year's experience, having had worms of the same variety and hatching, fed at two different places and upon the same kind of foliage. One parcel were fed attentively from early dawn of morning to the shades of evening by persons who were paid by the pound for all the cocoons raised, and thus interested; and the cocoons produced were about *one-third* larger and heavier than the parcel fed by a person on *monthly wages*, and in a cocoonery too, constructed for open feeding in the midst of a vigorous growth of the best variety of mulberries, where fresh foliage could be gathered with the greatest facility every hour of the day. But those who fed and were paid by the pound, were often necessitated to feed with wilted leaves, or branches collected from a distance at midday, for next morning's use; these were sometimes sprinkled with water, to preserve the freshness, and especially those collected to be used on the Sabbath. I have never known wet leaves injure the health of the worm; leaves gathered while moist with the dew, have been kept good two and three days fresh as when gathered. An experienced silk grower has told me that when he was a boy it was considered highly necessary to sprinkle the leaves with salt water; and have myself noticed that foliage so sprinkled has been preserved longer, and the worms appeared to like it.

A few years since we were visited with an early frost, while late crops were on feed. A silk grower having a parcel of worms wanting two or three weeks to finish, perceiving that there was danger of a frost to cut off the foliage, gathered towards night, while there might be some dew on the leaves, a quantity of foliage which he stowed into salt-bags; these leaves did not heat or mould, but were well preserved for feed, so that the worms were enabled to form good cocoons.

That our climate is peculiarly adapted to the culture of silk, is confirmed by almost 100 years' operation, and corroborated by the silk record of President Styles, written some 80 years ago, and also by the Journal of Joseph Clark.

Gentlemen who have visited Canton, and acquainted with the silk trade, uniformly agree that silk raised in the high districts of China, in a climate corresponding with ours, is worth in Canton 20 per cent over that raised elsewhere, having a stronger fibre and greater lustre.

Another important question for silk growers, is the best kind of silk-worm. Some are satisfied with the large sulphur kind, enveloped with a *superabundance* of floss; others prefer the peanut variety, having *less* floss, *less* gum, more strength and lustre of fibre, and affording more silk than the other varieties. The superior excellency of the peanut variety, was testified by a silk manufacturer and dyer, before a court holden to take depositions to be used in a suit pending in Nantucket.

It has been a common remark that silk culture, to be made profitable, should be connected with other farming business, and doing up the whole in a *family way*. An instance in point has occurred in this vicinity, where a person says he *has* and *can* make more clear profit from his small patch of Canton mulberries than from all the products of his farm.

But if worms can be fed with better success upon the *open* Chinese plan, in better ventilated cocooneries or tents, and the *one* and *early* crop system be adopted, and if the after foliage and bark of the young mulberry can be appropriated to any new and important use, as it is hoped may be demonstrated another year, then and in that event, the cultivator of the soil may go extensively into the business, with great safety and profit to himself, and thus contribute towards the demand for three hundred millions worth of raw silk, supposed to be annually wanted, to supply ourselves and foreign countries. There are silk producing and manufacturing countries, which do not raise enough of the raw material for their own consumption. It has been said that the English market requires annually nearly one hundred millions worth of the raw material, and do not, as we understand, raise a pound of it. America must be very industrious for some years, to raise even enough for her own market, although it has been predicted that we *must* and *can* do it, and even more within ten years. To accomplish which, however, will require a *great multiplication* of trees, not only for feeding worms, but for other important purposes, which have been *suggested*, and we hope will be accomplished by another year's experiment. With us the demand for silk goods must annually advance, to supply the rapid increase of population.

In this country, as an experiment, cotton began to be raised at no great distance of time from the present; for it is within the recollection of many of our inhabitants, when the whole operation was performed by manual labor—before Whitney's improvement for separating the seed from the cotton. This machine I saw placed at the head of Long Wharf, in New-Haven, in gone-by days, while a student in Yale College, with the cotton between cylinders, to show the operation, and with what facility it could do the business. What Whitney's machine then was to encourage the growth of cotton, our inventions and improvements may be to promote the culture of silk.

By uninterrupted perseverance in the culture of cotton, some sixty millions of that article is said to be annually *exported*, exclusive of the immense quantity manufactured at home for our own and foreign markets; and why may not the same perseverance in the silk cause be attended with corresponding success, and become a great national staple? We have every facility requisite to diversify labor, and give employment to our increasing population.

It has been estimated that two-thirds of the exports of Italy consist of silks; and in France, silk and silk manufactures, are among the most productive sources of national wealth. Our habits of industry, perseverance, and mechanical tact, are in our favor, and we entertain the opinion, that there is no country where silk can be be made of a *better* quality, and probably at less *actual* expense, than in America.

Among the objections to our successful operations in the silk culture, is the sickness of worms, which has occasionally occurred; but it is thought that this may be obviated by the recent improvements recommended in the *manner* and *time* of feeding.

A few years since, an Italian, conversant with the Italian mode of feeding, was employed in this town to feed worms. He took the business in hand in a spirited manner; kept the cocoonery at a certain temperature by artificial heat. His employer, however, took a part of the worms and placed them in a separate room, kept the windows open day and night, (used no artificial heat,) fed wholly with branches, and cleaned the litter but once during the whole time, and the worms wound their cocoons *one whole week* earlier than those fed by the Italian, to his utter astonishment, and who probably thought this a *queer country.*

It is recorded that from time immemorial, until within a few years, in Europe, that nearly *one-half* of the worms have annually perished; from causes, although not fully developed, yet from the mode of feeding, we can readily conjecture them. Aside from this, the culture of silk in Europe has been considered a lucrative business.

Having had the perusal of President Styles' Silk Journal, and that of Joseph Clark, of olden time, it appears that the general loss of worms were estimated at about *one-third*; we anticipate that this will be very much diminished by the adoption of open feeding, according to the Chinese method. This is emphatically a year of experiments, commenced, but not completed; let us hope for the best results *another* and *another* year.

DANIEL STEBBINS.

Northampton, October 1st, 1843.

(J.)

LIST OF IMPROVED CATTLE,

With their Pedigrees, together with Horses, Mules, Sheep, Swine, and Poultry, exhibited at the 16th Annual Fair of the American Institute, on the 18th and 19th of October, 1843.

CATTLE.

No. 1.—A yearling Durham bull. Entered by Clarkson F. Crosby, Watervliet, Albany Co., New York.

No. 2.—A three year old bull, "Prince Hal," by Prince; dam, Rosilla. Entered by Henry Watson, East Windsor, Conn. For sale.

No. 3.—A red and white thorough-bred Durham heifer, "Juliet," one year old. Entered by G. S. West, New York.

No. 4.—A roan and white Durham bull, five years old. Imported; calved in 1837. Entered by Norman Peck.

No. 5.—An Imported short-horn bull.
An Ayrshire cow.
An Alderney bull; full blooded.
do heifer; do.
Entered by Roswell L. Colt, Paterson, N. J.

No. 6—A bull, "Sir Temple." A Durham bull, two years old, by Hall's Meteor; dam, imported cow "White Lily." Durham cow, "Celeste," by Harlæm Comet, out of White Lily; full blooded. Entered by Thomas Addis Emmet, Mount Vernon, N. Y.

No. 7.—A brindle bull, "Comet," two years old in February last, weighed 2,072 pounds on the 12th of this month. Entered by Jacob Manning, Plainfield, N. J. For sale.

No. 8.—A white bull-calf, "Jupiter," 19 months old. Entered by G. M'Woolsey, Hell-Gate Neck, L. I.

No. 9.—A white Durham heifer, two years old, by Hall's Harlæm Comet; dam, Fose, by Hall's Greenbush, by Albion. A yearling heifer, by Col. Williams' Sir John; dam, by Hall's imported Comet. Entered by John Rutter, of Yorkville, N. Y.

No. 10.—A Durham bull, "Secundus," red and white, three years old; sire, Primus, by Charles Henry Hall's imported Magnet; dam, the imported cow Alice. Entered by David F. Clarkson, Long Island.

No. 11.—A Durham bull, "Jupiter," four years old; got by Young Rubens; dam, Princes, by Henry. Entered by Captain Ezra Nye, New-York. For sale.

No. 12.—A full-blooded Durham bull, "Prince Albert," three years old, red and white; gotten in England, out of a Durham cow. Entered by Nathan Coleman, Poughkeepsie, N. Y. For sale.

No. 13.—A fat cow, fed entirely on grass. Entered by William P. Moss, superintendent of the poor-house, on behalf of the common council of the city of New-York.

No. 14.—A full-blooded Durham bull, "Zero," red and white, three years old. Entered by William Gibbons, Madison, N. J.

No. 15.—A red and white heifer-calf, calved February, 1843. Entered by William Gibbons, Madison, N. J.

No. 16.—A red and white Durham bull, yearling, calved March 16th, 1843. Entered by William Gibbons, Madison, N. J. For sale.

No. 17.—A white Durham bull calf, calved April 5th, 1843. Entered by William Gibbons, Madison, N. J. For sale.

No. 18.—A Durham bull, "Snow Ball." Entered by Mr. Bache, New-York. For sale.

No. 19.—A red bull-calf, native breed, four months old, out of a red cow, owned by E. C. Read, of New-Haven, Conn. Entered by Read Benedict, Richmond county, S. I.

No. 20.—A cow, half Durham and half Ayrshire, black and white; calved in April. For two months gave from 32 to 37 quarts of milk per day; fed on grass. Has made from her milk sixteen pounds of butter per week. Entered by Henry Smith, of Astoria, Long Island.

No. 21.—A Durham bull, "Carter," white, three years old; got by the imported Durham bull, Majestic; dam, the imported cow Maria, by Henwood. Entered by John A. Pool, New-Brunswick, N. J.

No. 22.—A Durham heifer, "Emma, one year old, got by the Durham bull, Bernard; dam, imported cow Fanny, by Charlie. Entered by John A. Pool, New Brunswick, N. J. For sale.

No. 23.—An imported Chinese cow and calf. Entered by John A Pool, New Brunswick, N. J. For sale.

No. 24.—A half-bred calf, calved 6th May, white and red about the head; got by a son of Hall's Harlæm Comet; dam, native cow. Entered by Robert L. Stevens, New-York.

No. 25.—A lot of cattle. Entered by Mr. Colden, Hempstead, Long Island.

No. 26.—A Durham cow, "Alice." Entered by Rev. Wm. Richmond, Bloomingdale, New-York.

No. 27.—A Durham heifer-calf, "Bozza," yearling. Entered by Rev. William Richmond, Bloomingdale.

No. 28.—A Durham bull, "Meteor," two years old; got by imported bull, Duke of Wellington. Entered by George Vail, Troy, New-York.

No. 29.—A Durham bull-calf, "Bertram," 6 months old; got by imported bull, Duke of Wellington.

No. 30.—A Durham heifer, "Victoria," two years; got by imported bull, Duke of Wellington.

No 31.—A Durham cow, "Rosilla," by Enchanter; dam, Elvira. Entered by Melancthon Hudson, Hartford, Conn.

No. 32.—A Durham cow and calf. Entered by Thomas Brittain, New-York.

No. 33.—A white cow, "Jenny," seven years old; from a Durham cow, by an imported bull. Entered by David Melville, Newark, N. J.

No. 34.—A blue Heifer, two years old; from a Durham cow; sire, half-bred Durham bull. Entered by David Melville, Newark, N. J.

No. 35.—A white bull, "Essex;" grandson of the cow Jenny; sire, a thorough-bred Durham bull. Entered by David Melville, Newark, N. J.

No. 36.—A full-blooded Durham bull-calf, calved in March, 1843. A cow, the mother of the mother of the above. Entered by Cyrus S. Browning, West Hoboken, N. J. For sale.

No. 37.—A full-blood, short-horn Durham cow, "Primrose;" white; eight years old. Entered by H. T. Chapman, Bedford, L. I. For sale.

No. 38.—A full-blood, short-horn Durham heifer-calf, yearling; out of No. 37; sired by a short-horn bull of the Patroon, at Albany Entered by H. F. Chapman, Bedford, L. I.

No. 39.—A full-blood Durham milch cow, "Strawberry," spotted; 3½ years old; a good milker. Entered by H. T. Chapman, Bedford, L. I.

No. 40.—A short-horn Durham heifer, "Victoria," out of the imported cow Matilda, by Young Wallace. Entered by Wm. Pirnie, Harrisontown, New-York.

No. 41.—A Scotch bull and a heifer, of the Ayrshire breed, three years old. Entered by James Thom, Rockland Co., N. Y.

No. 42.—A Durham bull, "Ned," white and roan, three years old; by Hall's Harlæm Comet; dam, an imported Durham cow, owned by Elisha Peck. Entered by John K. Roe, Orange Co., N. Y. For sale.

No. 43.—A red and white short-horn Durham cow, "Ringlet," eight years old; got by Belshazzar, (1704;) dam, Rose, by Navigator, (1260;) grand dam, by Jasper, (331,) &c. &c. Entered by Henry Whitney, New-Haven, Conn.

No. 44.—A roan colored short-horned Durham cow, "Strawberry," eight years old; got by Ambo, (1636;) dam, Fair Helen, by Young Albion, (15;) grand dam, Miss Foote, by Pilot, (496;) great grand dam. Fair Maid, by Agamemnon, (9,) &c., &c. Entered by Henry Whitney, New-Haven, Conn.

No. 45.—A red and white short-horned Durham heifer, "Cornelia," two years old; got by Birmingham; dam, Ringlet, by Belshazzar, (1704;) grand dam, Rose, by Navigator, (1260,) &c. &c. Entered by Whitney, New-Haven, Conn.

No. 46.—A red and white short-horned bull-calf, five months old; got by Tempest; dam, Cornelia, by Birmingham; grand dam, Ringlet, by Belshazzar, (1704,) &c. &c. Entered by Henry Whitney, New-Haven, Conn. For sale.

No. 47—A Durham heifer, two years old, and calf by her side. Entered by Alexander Buchanan, New-York.

No. 48.—A Durham cow and calf. Entered by Joshua Culver, Somerstown, Westchester Co., N. Y. For sale.

No. 49.—A white Durham bull-calf, "John-Bull," five and a half months old; weighs 550 pounds.

No. 50.—A pair of working oxen, six years old. Entered by Lambert Wyckoff, Bushwick, Long Island.

No. 51.—A thorough-bred Alderney cow, out of an imported Alderney, bred by Doctor J. A. Pool, of N. J., and took the silver cup at the American Institute Fair, 1842. In calf by the Durham bull, Prince of Fulton. Entered by S. W. West, New-York.

No. 52. A short-horned Durham bull, "Royal William," cream colored, four years old; bred by John Johnson, Esq., of Geneva; got by Forager; dam, Signorina, by Carlos. Forager was got by Rover, alias Charlie, bred by the Earl of Carlisle. Entered by S. V. R. Ableman, Albany, N. Y. For sale.

No. 53. A full-blooded Durham bull, three years old. Entered by Stephen L. Decker, Bedford, L. I. For sale.

No. 54.—A native cow, "Beauty," 7 years old, the dam of the bull-calf that took the silver medal last year. Entered by Bethuel Brockett, New-Haven, Conn.

No. 55.—A bull-calf, "Young Prince," 4 months old; got by Prince; dam, Beauty. Entered by Bethuel Brockett, New-Haven, Conn.

No. 56. A bull-calf, "Young-Chief," 5 months old; got by Prince. Entered by Bethuel Brockett, New-Haven Conn.

No. 57.—A pair of red working oxen, 6 years old. Entered by Benajah Ives, Cheshire, Conn.

No. 58. A red Devon bull, 4 years old. Entered by Henry Hull, Woodbury, Conn.

No. 59.—A red and white Durham cow, "Ringlet," 5 years old; out of Young Favorite, by Superior, Young Favorite was from Old Favorite, by General, &c., &c. Entered by Wm. K. Townsend, New-Haven, Conn. For sale.

No. 60.—A white and red heifer calf, "Young Ringlet;" calved July 12th, 1843; got by Magnum Bonum. Entered by Wm. K. Townsend, New-Haven, Conn. For sale.

No. 61.—A white bull, "Comet," with red spots about the shoulders and legs, twenty months old, from Lily, by Lord Durham. Lily is from Beauty. Entered by Wm. K. Townsend, New-Haven, Conn. For sale.

No. 62.—A white heifer, "White Rose," with red fringed ears, four months old; is from White Rose, by Magnum Bonum. Entered by Wm. K. Townsend, New-Haven, Conn. For sale.

No. 63.—A bull, "Buck-Eye," 3 months old, red and white, from Queen Victoria; got by Magnum Bonum. Entered by Wm. K. Townsend, New-Haven, Conn. For sale.

No. 64.—A thorough-bred Durham cow, "Elegance," 8 years old, white; dam, Aconite, (254,) by Finculo, (2775.) Entered by Andrew Parsons, Paterson, N. J.

No. 65.—A thorough-bred Durham yearling heifer, 18 months old; dam, No. 65. Entered by Andrew Parsons, jr., Paterson, N. J.

No. 66.—A Durham cow and calf. Entered by Josiah Purdy, Rye, Westchester Co., N. Y. For sale.

No. 67.—Nine buffaloes, caught when young upon the Arkansas river, in the Missouri Territory, at the foot of the Rocky Mountains. Entered by Wm. Fitzhugh, Jackson, Co., Missouri. For sale.

No. 68.—Two spring calves, 16 months old 26th of March; the other 6th April. Entered by John A. Smith, Montgomery, Orange county, N. Y.

No. 69.—One cow and calf. Entered by Edmund Wait, Montgomery, Orange county, N. Y.

No. 70.—One bull, 5 years old, by Regent, (Hall's,) Tommy Regent, out of Shaker, or by Comet, grand-dam by Albion For sale. Entered by Isaac Adriance, of New-York.

No. 71.—One three year old full-blooded heifer, "Beauty," by Hall's Meteor, out of Crescent, by Patroon. One two year old heifer, "Magnolia," by Hall's Regent, out of the imported short-horned cow Leoncia, full-blooded Durham. Entered by Lewis Freeman.

No. 72.—One yearling heifer, native breed. Entered by Joseph Clowes, Harsimus, N. J.

No. 73.—One short-legged Dutch cow, black and white, 7 years old. Entered by John R. Peters, N. Y.

No. 74.—One pair brindle working oxen. Entered by Cornelius Van Winkle, Paterson, N. J.

No. 75.—Seven spring calves, half-blood Durham and Devonshire. Entered by David McWilliams, Orange county, N. Y.

HORSES.

No. 1.—A brood mare, "Betsey Wilson;" bred by Gen. Emory, of Maryland; foaled in 1826; dam, Lady Clifton; sire, Ratsay; dam, by Ogle's Oscar; gr. dam, by Othello; gt. gr. dam, D. L. Lloyd's Traveller; gt. gt. gr. dam, by Dames's Figure; gt. gt. gt. gr. dam, imported by Mr. Crow, of Philadelphia, sister to Northumberland. Entered by Henry Watson, East Windsor, Connecticut. For sale.

No. 2.—A brood mare, "Young Lady Lightfoot," by Shark, out of old Lady Lightfoot, the dam of Eclipse, Lightfoot, Black Maria, Shark, &c. Entered by Charles Mullet Hall, Harlem, N. Y.

No. 3.—An Indian grey mare, from the far west. A colt out of do., by Mr. Lewis (of Poughkeepsie) blood horse. The mare is a great traveller, and of great endurance. Entered by Alexander Benedict, Richmond Co., Staten Island.

No. 4.—A brood mare, "Gulnare," sired by Durve; dam, Sport's Mistress, by Hickory; gr. dam, Miller's Damsel, the dam of American Eclipse. Entered by John H. Coster, Eastchester, N. Y.

No. 5.—A gray stud horse, 7 years old. Entered by Henry Vandewater, New-York. For sale.

No. 6.—A brood Mare, "Pollie Hopkins," 21 years old. By Virginian; dam, by imported Archduke. Colt foal by Trustee. Entered by Robert L. Stevens, New-York.

No. 7.—A brood mare, "Indiana;" bay; got by Old Archie; her dam, by Constitution. Entered by Doct. John A. Pool, New-Brunswick, N. J. For sale.

No. 8—A gray horse, 7 years old last spring. Raised in Dutchess Co. A mixture of Messenger and Membrino. Entered by William Noyes, New-York. For sale.

No. 9.—A year old stud. Got by a colt from Abdallah and Lady Blanch. Entered by Ezrahiah Wetmore, Westchester Co., N. Y.

No. 10.—A stud horse, "Duroc," 8 years old. Entered by Jacob Laforge, New-York.

MULES.

No. 1.—Don Juan, an imported Spanish Jack. A Jennette, broke to the saddle. Entered by John A. Pool, New-Brunswick, N. J. For sale.

No. 2.—A pair of working mules. Entered by Joseph L. Franklin, Flushing, L. I.

No. 3.—A pair of working mules, sisters, 4 and 5 years old. Entered by Robert L. Stevens, New-York.

SHEEP.

No. 1.—Two rams, Lincolnshire breed.
One do. 3 years old.
do do: do.
Two ewes, 4 years old.
One do. 2 do.
One lamb, this year's.
Entered by Charles Blackbourne, Bedford, L. I.

No. 2.—One South Down ram.
One do. do. ewe.

One South Down wether.

Eight do. do. bucks. For sale. From pure imported stock. Entered by William Dowden, of Baskinridge, New-Jersey.

No. 3.—Leicester sheep. Entered by James Broidie, Westchester, New-York.

No. 4.—One long-wool Cotswold buck, 4 years old. For sale.
One do. do. ewe, 3 do.
One middle-wool, South Down buck, 3 years old, do.
One Cotswold and South Down wether, 3 years old.
Entered by J. McDonald McIntyre, Albany, N. Y.

No. 5.—One ram, five years old ; bred by Thomas Elman, Glynde, Sussex, England.
Two rams, four years old ; bred by the same.
Two rams, one year old, by one of the above rams, by ewes belonging to Samuel and James White.
One ram-lamb, bred by the same.
Entered by Obadiah Elliot, Middleham Union, N. J.

No. 6.—Two yearling South Down bucks.
Three buck-lambs.
Five ewes. For sale, together with a flock of 40.
Entered by F. M. Rotch, Butternuts, Otsego county.

No. 7.—Six South Down ewes, two and three years old ; from the stock of the Lord of Essay. Entered by John Beatty.

No. 8.—One Leicester ewe.
One do. ramb-lamb.
One do. ewe-lamb. Entered by William Pirnie; Harrisontown, New-York.

No. 9.—One South Down ewe and lamb. Entered by Roswell S. Colt, Patterson, N. J.

No. 10.—Three Leicester ewe-lambs.
Three do. buck do.
Two do. rams.
Two Cotswold do. Entered by George Monteath, Albany, N. Y.

SWINE.

No. 1. One Berkshire sow, 16 months old; sire and dam were imported by Mr. Thomas, of Albany, from the stock of Mr. Palmer, Member of Parliament. Entered by John Rutter, of Yorkville, N. Y.

No. 2. One Berkshire boar, 18 months old, Danton. One do. sow, "Tallien." Four do. pigs, 2½ months old. For sale. Entered by Alex. Benedict, of Staten Island.

No. 3. One sow, "Pocahontas," four years old. (Columbia

Breed.) Two boar pigs, 7 months old, do. For sale. Entered by H. Tibbits, Yonkers, N. Y.

No. 4. One white sow, 18 months old, with pigs, second litter. A young boar, from her on the ground. For sale. Entered by Wm. McLinchey, Yorkville.

No. 5. One boar, (his sire a Berkshire,) weight 300 pounds. Entered by Patrick McCaffrey.

No. 6. Four Woburn boars, 4 months old. For sale. Entered by Rufus Rowe, 14 Cherry-street, New-York.

No. 7. One Berkshire sow. Entered by Nathan Jackson, corner of 14th-street and 3rd Avenue, N. Y.

No. 8. One sow, poor man's breed, from 22 months to 3 years old. For sale. Entered by C. P. Howell, Newtown, L. I.

No. 9. One imported Woburn boar, "Falstaff." One full-blood Woburn sow, nine months old; got by Falstaff, from an imported sow. One full-blood Berkshire boar, " Black Prince," by Windsor Castle. C Starr, jr. Mendham, N. J.

No. 10. One Berkshire sow, 2 years old. One ditto boar, 7 months old. Entered by James Webber, N. Y.

No. 11. One Berkshire sow, 21 months old. For sale. Entered by J. B Weeden, New-York.

No. 12. One sow pig, " Moco," China breed. One spotted boar, Berkshire breed. Entered by Wm. P. Moss, Superintendent of the Alms House, N. Y.

GEESE AND DUCKS.

No. 1. One pair of Chinese white geese. One do. of Bremen geese. One do. of Mongrel geese, half Bremen and half wild goose, by a Bremen gander; a rare occurrence. One pair Muscovy ducks. Entered by Charles Mullet Hall, of Harlem.

No. 2. One pair of Bremen goslings. Entered by Wm. Ross, Ravenswood, L. I.

No 3. One pair of Mongrel geese. Entered by Dr. Henry A. Field, New-York.

No. 4. One pair of Bremen geese. Two do. Muscovy ducks. Entered by W. J. Townsend, Astoria, L. I.

No. 5. One pair of Muscovy ducks. Entered by S. A. Halsey, Astoria, L. I.

No. 6. One pair of Chinese geese. Entered by Dr. T. Clarkson, Flatbush, L. I.

No. 7. One pair of half-breed Muscovy ducks. Entered by G. W. Jaques, Rahway, N. J.

FOWLS.

No. 1.—One hen that lays two eggs per day. Four Poland fowls. Entered by Wm. Ross, Ravenswood, L. I.

No. 2.—One pair of Poland fowls. One pair imported Chinese fowls. One pair pheasant fowls. Entered by S. A. Halsey, Astoria, L. I.

No. 3.—One pair Bucks Co. capon fowls. Entered by Thos. Bartine, Astoria, L. I.

No. 4.—Two pair of Dorking fowls. Entered by H. T. Chapman, Bedford, L. I.

No. 5.—Four full-blooded Egyptian fowls. Entered by J. W. Goodwin.

No. 6.—One fowl with four legs. Entered by Wm. Armstrong, N. Y.

(K.)

ACCOUNTS OF SALES

Of Flour, Mess Beef, India Pork, Prime Mess Pork, Good American Butter, Grease Butter, Lard, Cheese, and Tallow, made in London in 1843, *showing the nett proceeds to the farmer ; together with the freights from New-York to Liverpool. Jan.* 26, 1844.

Pro-forma account of sales of 100 *barrels of Flour. London*, 1843.
L. Sold at 60 days.

				£	s.	d.
100 bbls. flour in bond, at 28*s*.				115	0	0
Charges.						
Paid freight as per B. L. on 100 bbls., at 3*s*.	£15	0	0			
Paid primage on freight, at 5 per cent, ...	0	15	0			
Landing, wharfage, weighing and shipping 100 bbls. flour, 192 cwt., 5 qrs., and 2 lbs. at 3*s*. 6*d*. per ton, ...	1	13	9			
Cooperage, 100 bbls. at 2*d* each,..........	0	16	8			
Lighterage on board Regalia, for Barbadoes,	1	5	0			
Paid for bonding entry,..................	0	15	0			
Factorage on 100 bbls. at 6*d*., ...	2	10	0			
Del Creder 1 per cent, ...	1	3	0			
Commissions on £115, at 5 per cent,.......	5	15	0			
				27	13	5
Nett proceeds, ...				£87	6	7

At 8 per cent exchange, $416.75, or $4.17 per barrel.

Pro-forma account of sales of 100 *tierces of Mess Beef, sold for cash, at* 1¼ *per cent discount. London*, 1843.

	£	s.	d.	£	s.	d.
100 tierces mess beef, in bond, at 80*s*. ...	400	0	0			
Less 1¼ per cent discount,......	5	0	0			
				395	0	0
Carried forward, ...				395	0	0

	£	s.	d.	£	s.	d.
Brought forward, ...				395	0	0
Charges.						
Freight 6*s*. 6*d*., primage 5 per cent, and insurance, ...	£36	17	7			
Custom-house 7*s*., fire insurance 5*s*., ...	0	12	0			
Landing, lighterage, wharfage, housing, weighing, &c., ...	2	17	6			
Coopering and pickling, opening for inspection, rent, &c.	2	10	0			
Commission (including brokerage,) 5 per cent, ...	20	0	0			
				62	17	1
Nett proceeds, ...				£332	2	11

At 8 per cent exchange, $1,593.82, or $15.94 per tierce.

Pro-forma account of sales of 100 *tierces of India Pork, sold for cash, at* 1¼ *per cent discount. London*, 1843.

	£	s.	d.	£	s.	d.
100 tierces India pork, in bond, 318 lbs. each, at 87*s*. 6*d*., ...	437	10	0			
Less discount, 1¼ per cent, ...	5	9	3			
				432	0	9
Charges.						
Freight 6*s*. 6*d*., primage 5 per cent, insurance, ...	36	17	7			
Custom-house 7*s*., fire insurance 5*s* ,......	0	12	0			
Landing, lighterage, wharfage, housing, weighing, &c.	2	17	6			
Coopering and pickling, opening, rent, &c.	2	10	0			
Commissions and guarantee, brokerage, &c.	21	17	0			
				64	14	1
Nett proceeds, ...				£367	6	8

At 8 per cent exchange, $1,763.20, or $17.63 per tierce.

Pro-forma account sales of 100 *barrels Prime Mess Pork, in bond. Sold for cash, at* 1¼ *per cent discount. London*, 1843.

	£	s.	d.
100 barrels prime Mess Pork, at 45*s*.	225	0	0
Less 1¼ per cent discount.	2	16	3
Carried forward.	£222	3	9

	£	s.	d.	£	s.	d.
Brought forward,				£222	3	9
Charges.						
Freight 3*s*., Primage 5 per cent., insurance 1 per cent.	18	0	0			
Custom-house expenses 7*s*., fire insurance 3*s*.		10	0			
Landing, lighterage, wharfage, houseing, weighing, &c.	1	17	6			
Cooperage and pickling, opening for inspection, rent, &c.	2	0	0			
Commission and guarantee, including brokerage, 5 per cent.	11	5	0			
				33	12	6
Nett proceeds.				£188	11	3

At 8 per cent exchange, $905.10, or $9.05, per barrel.

Pro-forma account of sales of 32 *casks Good American Butter, sold at* 60 *days. London,* 1843.

	cwt. qr. lb.	£ s. d.	£ s. d.	£ s. d.
Weighing, gross	28 3 14			
Tare, 19 lbs. each	5 1 20			
at 60*s*. per cwt.	23 1 22			70 6 9
Charges.				
Paid duty on landing, gross Weight,	29 1 0			
Tare	5 1 20			
at 20*s*. per cwt.	23 3 8		23 16 5	
Paid 5 per cent additional			1 3 10	
Freight on 29 cwt. 1 qr., at 35*s*. per ton,		2 11 2		
Primage 5 per cent,		2 6	2 13 8	
Landing charges and weighing, 7d per cask,		£0 18 8		
Rent for 10 weeks at 5*s*., 100 casks per week,		16 0		
		£1 14 8		
Less discount 10 per cent.,		3 6	1 11 2	
Bill stamp 3s. 6d., warehousing and duty per entry 5*s*.,			8 6	
Carried forward,				£70 6 9

Brought forward, ...				£70	6	9
Fire insurance,..............................	£0	2	9			
Interest on above charges, 61 days at 5 per cent,		5	0			
Commission on £70 6 9 at 5 per cent,.......	3	10	4			
				33	11	8
Nett proceeds,.......................				£36	15	1

At 8 per cent exchange, $176.40, or 6 $\frac{72}{100}$ cts. per lb.

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Pro-forma account of sales of 500 *casks Grease Butter, sold at* 2 *months' discount, in bond. London,* 1843.

	cwt.	qr.	lb.	£	s.	d.	£.	s.	d.
500 casks,.	460	0	0						
Tare,.....	76	0	0						
	384	0	0 nett at 32s..........	614	8	0			
Less discount, 2 months,				5	2	0			
							609	6	0
Freight 35*s*., primage 5 per cent., insurance 1 per cent,...........................				£48	8	3			
Custom-house 3*s*. 6*d*., fire insurance 10*s*....					13	6			
Landing, wharfage, weighing, &c..........				15	0	0			
Commission and guarantee, including brokerage, 5 per cent........................				30	14	0			
							94	15	9
Nett proceeds,......................							£514	10	3

At 8 per cent exchange, $2,468.34, or 5 $\frac{73}{100}$ cts. per lb.

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Pro-forma account of sales of 10 *tons of Lard ; cash,* 2½ *per cent discount. London,* 1843.

	£	s.	d.	£	d.	s.
10 tons nett (duty paid) at 39*s*. per cwt...	390	0	0			
Less 2½ per cent. discount......	9	15	0			
				380	5	0
Charges.						
Freight 30s., primage 5 per cent., insurance 1 per cent......................	£19	13	0			
Duty 2*s*. p. ct. and 5 p. ct. added, entries 5*s*.	21	5	0			
Wharfage, weighing, turning out public sale, expenses, &c.........................	2	10	0			
Commission and guarantee, (including brokerage) 5 per cent.,.................	19	0	0			
				62	8	0
Net proceeds,.........................				£317	17	0

At 8 per cent. exchange, $1,525.68 or 6 $\frac{81}{100}$ cts. per lb.

Pro-forma account of sales of 500 *boxes of Cheese.* *London*, 1843

	cwt.	qr.	lbs.		£	s.	d.
Sold at 60 days 500 boxes cheese,							
Weighing,	166	2	12				
Deduct 1 lb. beamage for every 3 cwt.,		2	0				
	166	0	12	at 45*s*.	373	14	10

Charges.

	£	s.	d.	£	s.	d.
Paid freight and primage as per B. L. on 10 tons 1 cwt. 2 qr., at 25*s*. per ton gross,	13	5	10			
Paid duty and entry on 166 cwt. 3 qrs. 11 lbs. at 10*s*. 6*d*. per cwt. and 5 per ct. additional,	92	6	6			
Landing charges, weighing, opening, sampling, and re-weighing,	4	19	0			
Paid 3 weeks warehouse rent,	1	1	1			
" stamp duty 6*s*., postages 5*s*. 4*d*.,		11	4			
" fire insurance,		9	6			
Interest 65 days on cash charges above,	1	3	4			
Com'n on £373 14*s*. 10*d*. at 5 per cent,	18	13	9			
				132	10	4
Nett proceeds,				£241	4	6

At 8 per cent exchange, $1,157.88, or 8 $\frac{90}{100}$ cts. per lb.

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Pro-forma account of sales of 20 *tons North American Melted Tallow; sold for cash*, 2½ *per cent discount.* *London*, 1843.

	£	s.	d.	£	s.	d.
20 tons nett, at 44 per cent,	880	0	0			
Less discount 2½ per cent,	22	0	0			
				858	0	0

Charges.

	£	s.	d.			
Freight 35*s*., primage 5 per cent, insurance 1 per cent,	45	6	8			
Duty 3*s*. 2*d*. per cwt. and 5 per cent added,	66	10	0			
Custom-house entries,		5	0			
Wharfage, weighing, turning out, coopering, public sale, expenses, &c,	5	0	0			
Commissions and guarantee, including brokerage, 5 per cent.,	44	0	0			
				161	1	8
Nett proceeds,				£696	18	4

At 8 per cent exchange, $3,345.30, or $9.36 per cwt.

Rates of Freight from New-York to Liverpool, January 26, 1844.

Beef in tierces, 6*s*. and 7*s*. per tierce.
Beef in barrels, 3*s*. and 3*s*. 6*d*. per barrel.
Pork in barrels, 3*s*. and 3*s*. 6*d*. per barrel.
Butter and cheese, 40*s*. per ton.
Lard and tallow, 30*s*. and 35*s*. per ton.

The above are the rates in British sterling, with five per cent primage added.

(L.)

EXPENDITURES

On account of the Sixteenth Annual Fair of the American Institute, October, 1843.

By Printing and Publication Committee.

Printing circulars, blanks, invitations, hand-bills, &c.	$362 55	
Newspaper advertisements,	196 36	
Printing premiums and addresses,	148 17	
Books, stationery, flags, bill posting, &c.,	91 36	
		$798 44

By Committee of Arrangements.

Lumber and ironmongery,	$174 63	
Carpenters' work,	133 25	
Clerks and assistants,	211 50	
Police,	128 00	
Door keepers,	58 50	
Night watch,	47 00	
Laborers,	105 75	
Steam power for putting in operation agricultural and mechanical machines,	326 11	
Gas lights, oil and candles,	292 61	
Muslin for flags, tables, &c.	55 75	
Cartage,	16 50	
Glazing show cases,	55 18	
Transparencies,	13 00	
Services Hutchinson family,	26 75	
Petty expenses,	54 73	
		1,699 26

By Finance Committee.

Ticket sellers and receivers,		113 00
Carried forward,		$2,610 70

Brought forward,		$2,610 70

By Committee on room and music, for Address.

Rent of Tabernacle,	$75 00	
Services of Hutchinson family,	50 00	
Use of platform, &c.	5 25	
		130 25

By Committee on Refreshments.

Dinners and teas for acting managers and guests,	$287 56	
Expenses of Bands from Navy Yard and Governor's Island, at the Fair and Ploughing exhibition,	80 72	
		367 28

By Agricultural Committee.

Expenses by Horticultural Committee,	$153 74	
Erecting sheds, stalls, &c.	152 00	
Clerks and laborers,	61 00	
Band for procession,	25 00	
Expenses of buffaloes,	14 41	
Do examining committee,	58 00	
Horse hire,	6 25	
		470 40

By Miscellaneous Bills.

Rents of garden and premises,		1,222 00
Fireworks,		85 00
Expenses of orators,		84 00

By Premium Committee.

Silver cups,	$253 75	
Gold and silver for medals,	495 17	
Striking up medals,	63 00	
Engraving cups and medals,	83 25	
Medal cases and seals,	32 88	
Diplomas,	75 00	
Filling up diplomas,	100 00	
Agricultural books and binding, for premiums,	80 40	
		1,183 45
		$6,153 08

Expenditures of the Repository of the American Institute, from March 31, 1843, *to March* 31, 1844.

Salary of superintending agent,	$1,250 00
" " Clerks,	800 00
" " Recording Secretary,	100 00
Rent of premises,	300 00
Fitting up new room for library,	245 00
New bookcases for library,	249 25
Plastering and whitewashing,	27 00
Painting,	11 13
Newspaper subscriptions and advertisements,	51 01
Books for library,	148 28
Binding books,	49 48
Mounting maps,	11 63
Repairs of office furniture and stoves,	20 89
Printing circulars, tickets, and blanks,	38 75
Blank books and stationery,	20 00
Oil, candles, and camphine,	41 12
Freight of minerals,	11 75
Agent's expenses to Albany,	25 88
Commission on collections,	6 70
Casts of fruit in wax,	20 00
Copying documents,	17 00
Fuel,	46 75
Cleaning and labor,	29 74
Damages and costs of suit, Price *vs.* American Institute,	205 81
Petty cash expenses,	190 21
	$3,917 38

AMERICAN INSTITUTE.

ANNUAL REPORT OF THE AMERICAN INSTITUTE OF THE CITY OF NEW-YORK—1844.

By an amendment of the law of this State "to promote agriculture," which amendment was passed May 7th, 1844, the annual reports of this Institute, which have heretofore been submitted to the Legislature, are now required to be made to the New-York State Agricultural Society. In compliance with this requirement, the trustees, on behalf of the Institute, respectfully submit the follwing remarks, with documents and papers annexed. The charter of this Institute was granted in 1829. Repeated attempts had been made, before that time, to establish an agricultural society in the city and county of New-York, and a temporary zeal had occasionally been created in its favor; but uniformly after a short time it had subsided. That continuation of attention and effort necessary to sustain such an institution in a flourishing condition, could not be kept up. In the charter of the American Institute, designed to encourage agriculture and the arts, not only in this State, but over the whole Union, with a permanent location, the friends of agriculture discovered the means of perpetuity and prosperity. In and about the city they at once rallied around this institution, particularly those who had been the most actively engaged in the societies that had been attempted to be established previous to that time. The connection of agriculture and the arts, as united in this institution, were found mutually auxiliary in promoting both. The farmer and gardener realized an interest and a popularity in their occupations never before exhibited; and when the New-York State Agricultural Society was proposed, the farmers and gardeners of this and the adjoining counties, and even States, united, with unparalleled unanimity, in petitions that the American Institute should represent that interest for the city and county of New-York. The plan was approved by the wisdom of the Legislature. Under efficient boards of agriculture, with the aid of committees for different objects, assisted by the managers of the Fair, and the agents and clerks of the association, the institution has progressed in prosperity, and an increasing zeal has been promoted in favor of agriculture and horticulture, far beyond any former example in this section of the country. At a single semi-monthly Farmers' Club there have appeared one hundred attendants. Some from our most western and northern counties, others from remote, as well as neighboring States; every one attentive listeners, and alive to the objects of the meeting.

The trustees will not attempt even a reference to all the records of doings, and the papers that have come under their consideration within the last year. Those appended will afford some partial idea of their objects and merits.

Consultation meetings, composed of some of the principal officers and members of the Institute, are held daily at the Repository, to overlook the correspondence, direct the distribution of seeds, &c., examine models, machines and proposed improvements, and answer inquiries constantly making by strangers and citizens, connected with their occupations. The inquiries are almost incessant through the day for articles shown at the Repository or at the Fairs—a record of which has been kept as a directory for the accommodation of purchasers, &c.

The Conversation Meetings have been held spring, winter and autumn, one evening every week. Reports of the proceedings of several of these meetings are among the appended papers. The Conversation Meetings are invaluable schools for manufacturers and mechanics, who by their means, can in a few hours possess themselves of information, which has cost others years to acquire. Great numbers attend, listen and learn, who never could have been persuaded to read, and would have forever remained deficient in knowledge of the highest importance in their occupations.

Meetings of the Board of Agriculture and New-York Farmers' Club have been held monthly, the first and third Tuesday. The first for the transaction of the business of the Institute, appertaining to agriculture. The Club, consisting of farmers, gardeners, and friends of agriculture, have met for free conversation on the subject of their occupations. All strangers in the city have, through the public papers, been invited to attend these meetings. A subject is named and published before the meeting, and a portion of the time of the meeting devoted to the discussion of the subject so named. All the attendants are invited to participate in the conversations. The trustees believe this the best mode ever devised for diffusing useful agricultural knowledge, and they respectfully recommend to the State Society, that efforts be made to establish them in all suitable localities in the State. The Institute will cheerfully render their hearty co-operation in such efforts. Extracts from the proceedings of the Club are among the annexed papers.

The stated meetings of the members of the Institute have been held monthly, in conformity to the charter, when members have been admitted, correspondence read, and reports of standing and special committees discussed and passed upon. All moneys received by the Institution are deposited with the treasurer, and cannot be withdrawn, except under an appropriation at one of these meetings. Each item is read, showing what the money is wanted for, before the appropriation can be made. All the books and accounts are open to every member, and all the vouchers accessible. This has prevented any defalcation in the funds of the Institute, and is not only a security against the misapplication of funds, but secures the confidence of the members in the management of the finances, at the same time that it enables every member, from his own knowledge, to put down any out-door misrepresentation that mischief may invent and circulate. This is the more desirable, as mischief often gathers malignity, in proportion to the increasing usefulness and popularity of the objects of its dislike.

Lectures and addresses have also frequently been delivered at the Repository, through the year, on subjects connected with the purposes of the Institute. The great room is lighted, warmed, and thrown open to the public, free of expense, to enable those whose means are limited, to obtain knowledge that shall cost them nothing. Specimens are appended.

Within the last year, great additions have been made to the Library of the American Institute, and particularly of standard works on agriculture, and all its divers branches of employment; and among these will be found the most approved periodicals of England, Scotland, and France, which are regularly received, and on our tables generally within twenty or thirty days from the time they are published in Europe. The number of volumes of books now equal about six thousand, and a day rarely passes without some addition. The bulk of the books are of a highly useful character, selected for practical purposes with great care, and, by competent judges, believed to be the most valuable in the city. This library, with the reading room, is open to the public every day, and is the continual resort of literary and scientific gentlemen, authors, compilers, &c., as well as practical farmers, manufacturers and mechanics, from all parts of the country.

The Seventeenth Annual Fair of the American Institute has also been held within the past year. Taken as a whole, this exhibition very considerably exceeded either of the sixteen that had preceded. For eighteen days, Niblo's Garden, situated on Broadway, in the midst of our densest population, was the grand centre of attraction in this great city, and of vast numbers from other and distant sections of the country; among them men occupying the highest stations, and of the most commanding talent. More than twenty thousand choice specimens from the departments of American agriculture and arts were arranged for their observation and inspection.

Contributions for the 17th Fair were from about two-thirds of the States of the Union, selected from farms, orchards, vineyards and gardens, in the highest condition of cultivation; grains and roots, and delicious fruits, and flowers of more tints, variant and multiplied, than ever before met the eyes of the visiters. These were placed in the long promenade. Some of the richest contributions of fruit were from Boston and its vicinity, which are described in the horticultural reports. In the great saloon was a vast mass of fabrics, that had received their last finish of genius and skill from the hands of thousands of manufacturers and artisans, all stimulated by the hopes of the prize. A powerful steam engine was placed at the extreme of the first floor of the north wing of the saloon, which gave motion to a long range of labor-saving machines, agricultural and others, many of which at that time received their first motion by steam, and exemplified to the public the first effectual test of their perfection. In the room directly above, were arranged the fabrics of wool, cotton, silk, &c. The great staples of clothing, woolen fabrics in particular, evinced a progress of the highest importance, and unlooked-for excellence. The improvements were, by the best judges, pronounced full fifteen per cent above those of any former fair; fabrics that would not suffer by a comparison with the best qualities from England, which had, centuries before we were a nation, put in requisition the best skill of Europe, and had protected and fostered them, regardless of expenditure, by all the means which that powerful nation could render available.

On the outer side of the main building, covering was fitted up for placing the very extensive display of farming, horticultural, mechanical and other machines, implements, tools, &c., calculated to economize labor; some entirely new, others improved, and nearly all bearing the impress of increasing skill in their finish.

The following extracts from some of the reports of the judges upon important articles exhibited, serve to indicate the progress and present condition of several branches of American industry, and leads to the conclusion, that with proper encouragement to those now engaged in, or who may hereafter engage in the production of the articles referred to, we shall not only have our whole supply produced at home, but have the quality equal, if not superior, to what we should receive if supplied from abroad.

The judges upon cotton goods remarked, respecting a lot of prints, "we consider these prints to illustrate better the near approach our manufactures have made to the *French*, than any in the exhibition. The committee take the liberty of calling the attention of the managers of the Institute to the unexampled improvement made by our manufacturers of prints during the past year. The samples in the exhibition room, in the view of the committee, are quite equal, in all essentials, to those of foreign manufacture. *Mouse de Laines* and *Balzarines* are new articles of American manufacture, and too much praise cannot be awarded to those who manufactured the specimens exhibited. These articles are consumed to a large extent in this country, and the manufacturers are entitled to great commendation for their near approach, in every particular, to the imported article."

The judges upon leather say, "we are not in possession of any statistical information of the quantity or amount of goods annually manufactured, but that there is a progressive improvement in the style, and reduction in the cost of manufacturing this article, we believe to be apparent."

The remarks of the judges upon straw and Leghorn goods, derive interest from the fact, that the Neapolitan hats, of which they speak, are an American invention. They say, "the Neapolitan hats exhibited, have been worn a season, and redressed. They have the appearance of new goods, and prove that in point of durability they are superior to any other bonnet. The specimens of Florence braid bonnets exhibited, show great improvements in making and finishing this description of goods."

The judges on church bells say of those exhibited, "in fact, as to quality, power, brilliancy of tone, and continuous vibrations, we do not remember to have heard or seen bells of American manufacture equal to them. We doubt whether better specimens can be found in any country."

The judges on fur and silk hats say, "they cannot but rejoice at the growing improvement of this important branch of American manufactures. The number of specimens exhibited was much larger than usual, and most of them do the manufacturers much credit."

The judges on book-binding say of some blank-books exhibited, "they are, decidedly, the best and most beautiful specimens of Russia blank-book binding. The ruling is without exception the most unique and beautiful we ever saw."

The judges on hardware and cutlery say of some wood screws exhibited, "they are equal, if not superior, to any screws made in England," and of some bow-saws, "very superior, which John Bull cannot beat."

The judges on gold and steel pens say of one parcel exhibited, "they are equal to any steel pens in the market," and of the gold pens, that "they are of very superior make and finish."

At the last Fair were presented, for the first time, some specimens of smiths' anvils, which were examined by the judges on machinery, &c., who reported, that "these specimens will compare with any anvils made in any country, as it regards form and temper, and are creditable to the maker."

The judges on dentistry reported, that "having examined the improved new style of mineral teeth, manufactured by Jas. Alcock, of New-York, feel satisfied they merit much for their utility, beauty of color and finish, and approach nearer to the natural teeth than any ever before exhibited, or offered to the profession."

At the same time that all the avenues and openings in and about the buildings were crowded with visitors, a National Convention of Farmers and Gardeners, Plowing and Spading Matches, and Cattle Show, were moving on, under the guidance of the Institute, in other places, and formed other centres which collected multitudes.

On four different days, during the first week of the Fair, a Silk Convention, and a National Convention of Farmers and Gardeners, met at the Repository of the Institute, near the City-Hall. Reports of both of these conventions are appended. The Silk Report is replete with practical facts and experiments, given in the language of the principal culturists in our country; and if consulted by our young undertakers, will be found an invaluable guide, and prevent many discouraging sacrifices.

The Farmers' and Gardeners' Convention was deeply impressed with the influence of foreign legislation on American industry in all the occupations, and especially in agriculture. Much of the report is devoted to illustrate the ingenuity employed, and its success in depressing the value of our surplus products, and in retarding the developments of our resources, and arresting our otherwise rapid progress in improvements and national prosperity, and also in suggesting such measures as would countervail the future blighting influences of such legislation. It is hoped the reasoning, facts, and statistics presented, will be read and seriously considered; and if our agriculturists concur in the conclusions which seem to have so powerfully impressed those who composed the Convention, that they then will cordially unite in such discreet means as will ensure reciprocity in our exchanges, trade, and intercourse with foreign countries. Both conventions adjourned, to meet again during the eighteenth annual Fair, on the call of the Institute.

The ninth Plowing Match and the first Spading Match were going on, the second week, at Fordham, Westchester county, which did not at all impede the harmony of the great central simultaneous movements at Niblo's. Both gave entire satisfaction, particularly the plowing, which, in the very high approbation universally expressed, was an exception to all that had gone before it. The spading was novel, and exhibiting muscular strength and skill in this useful exercise, on well selected ground, was highly applauded.

The Cattle Show, held at Vauxhall Garden, a short walk from Niblo's, instead of lessening, added to the numbers, and increased the interest of the latter place. Farmers from all the surrounding country took this opportunity to visit the Fair, as well as the place of the Cattle Show, which was crowded with these lords of the soil, who were continually engaged in the examination of the farming machines and implements, until the Fair ended. The show of cattle, as had been anticipated, was somewhat diminished by the State exhibition which had gone off before at Poughkeepsie. The exhibitors there had hardly rested from their fatigues, and many were unwilling to incur the trouble and expense of a second exhibition. In full view of these effects, the Institute was among the first to petition for that location for the State show, deeming it due to the county of Dutchess, and other counties adjoining, that every accommodation and encouragement should be extended to so respectable a portion of the farmers residing in those counties. The class of men who favored the location were so respectable, zealous and powerful, that it was then the opinion of the Institute it would result, as it did, in a grand display, and produce a decided influence in favor of the cause of agriculture generally. Notwithstanding, in respect to the quality of the high blood cattle, though not numerous, the number and superiority of the horses and working teams, and other animals at Vauxhall, rendered the show highly honorable to the exhibitors and the Institute. The fine teams, with vehicles attached, loaded with the rich produce of the field and the garden, that marched through the city, accompanied by a band of music, drew forth the most enthusiastic applause from the citizens wherever they appeared.

Although the variety of the objects of taste, beauty and novelty, presented to the eye were almost countless, they were not the only sources of gratification; the Addresses delivered in the great saloon were directed most effectually to the understanding. Some of them have been printed and are appended. They will be found replete with well selected thoughts on subjects of vast moment, expressed in the happiest manner language will permit. The Anniversary Address of Mr. Stuart, at the Tabernacle, may be pointed to, as a proud model for American orators and statesmen.

Compared with the doings of former years, the last year evidences a regularly increasing and progressive prosperity. In fact, the history of this Institution will show, that from a small beginning, it has grown every year in public favor, up to this time. The vast numbers congregated during its annual Fairs greatly exceed those of any other institution in our country. Starting in the outset without funds, it was compelled to adopt the most rigid economy. The whole salaries paid for officers conducting it, for seventeen years, will not average one-third the sum now allowed to a single officer of some of our literary institutions, calculated for the same number of years. Still, in liberality, its course is without example. The privileges of the reading-room and library, the Farmers' Club and Conversations, the examination of machines and models on daily exhibition, are free. So, with the lectures and addresses. Room is provided by the Institute, at a great annual expense, for every thing exhibited, either by the farmer, manufacturer or mechanic; whether entered for competition for premium or not, they come and go without cost. Arrangements are even made that the farmer shall not be imposed upon by others in the price of the provender his cattle may need. Contracts are procured from respectable dealers, to supply those who come to the show, at the lowest rates, all the varieties of cattle food; and where they can be bought has been posted up in conspicuous places at all the late shows of the Institute. Measures of this character, we respectfully recommend, should be universally adopted. A small expense incurred, adverse to the economical habits of the farmer, may prevent him from participating in meetings and public shows for the future, which may prevent the acquisition of that knowledge which might open his eyes to the value of knowledge generally of the highest importance, and cause him to be a zealous seeker after it, and also afford a shining example for others.

We have thus hinted at some of the doings of this Institute within the last year. That they have been approved, is evinced by the continual visitations, and full attendance of members at all the meetings at the Repository, by the entries of visiters at the Annual Fairs, which, on the best calculations, vary but little from 250,000, and, above all, the almost universal approbation of the public expressed in all quarters, not only orally, but in letters and printed papers, emanating from sources entitled to the highest consideration. Under circumstances so auspicious, the conductors of the Institute will persevere, most cordially co-operating with the State Agricultural Society, in the common objects committed to the charge of the two institutions.

JAMES TALLMADGE,
ADONIRAM CHANDLER,
WILLIAM INGLIS,
SHEPHERD KNAPP,
EDWARD T. BACKHOUSE,
T. B. WAKEMAN,
GURDON J. LEEDS.

March 1, 1845.

THE RECEIPTS AND EXPENDITURES

Of the American Institute of the City of New-York, from March 31, 1844, *to Feb.* 1, 1845.

RECEIPTS.

To Cash received from sales of tickets at the 17th Annual Fair 1844, at Niblo's Garden,.......	$9,678 35
" received at the Cattle Show at Vauxhall Garden,..................................	167 00
" lumber sold at the close of the Fair,.......	105 00
" rents of Confectionary and Perfumery stands, &c.,..................................	299 36
Contributed by members,.................	1,625 45
Amount on hand at the date of last report, April 4, 1844,.........................	1,343 01
	$13,218 17
" Amount from Comptroller of State (not yet received,) say	950 00
	$14,168 17

EXPENDITURES

On Account of 17*th Annual Fair of the American Institute*, *Oct*. 1844.

By Printing and Publication Committee.		
Printing Circulars, Catalogue of Cattle, Invitation Tickets, Blanks, Handbills, Badges,.........................	$331 40	
Printing Addresses,..................	164 79	
" Horticultural Report,.........	71 60	
" List of Premiums,............	51 00	
" Proceedings of Agricultural Convention,.........................	86 54	
Newspaper Advertisements,............	218 11	
Preparing Silk Report,................	25 00	
Contingent Expenses,.................	141 28	
		$1,089 72
By Committee of Arrangements.		
Lumber and Ironmongery,.............	$367 12	
Carpenters' work,.....................	193 88	
Clerks,...............................	96 00	
Door keepers, Assistants, & Night watch,	475 00	
Laborers,............................	112 50	
Steam Power, including Repairs of Boiler and shafting,.....................	351 76	
Rent of Boiler House,................	15 00	
Gas, Oil and Candles and Lighting,.....	398 60	

Horticultural Room expenses,	$238 47	
Muslin for tables and flags,	62 25	
Cartages,	24 68	
Glazing Show Cases,	68 44	
Petty Expenses,	64 81	
		$2,468 51

By Finance Committee.

Ticket sellers and receivers,		147 00

By Committee on Room and Music for Anniversary Address.

Rent of Tabernacle,	$75 00	
Use of Platform,	7 50	
Leader of New-York Sacred Music Society and Musicians,	40 00	
		112 50

By Committee on Refreshments.

Dinners and Teas for Managers and Guests,	$261 50	
Refreshments for Bands from Navy Yard and Governor's Island,	72 96	
Balance on Dinner—Farmer's Jubilee,	86 43	
		420 89

Miscellaneous Bills.

Rent of Garden and Premises—Niblo's,	$1,292 25	
" Vauxhall Garden, and erecting sheds,	181 96	
Expenses of Orator,	96 49	
Music in Saloon,	45 00	
Fire Works,	70 16	
Expenses, &c. (Walker's, Boston,)	43 00	
		1,728 86

By Premium Committee.

Premiums estimated at $1,360, of which has been paid $1,269.44, viz :

Gold and silver for Medals, and striking,	$573 44	
Silver Cups,	283 00	
Cash Premiums,	100 00	
Engraving,	97 25	
Diplomas—printing and filling up,	117 20	
Cases for Medals,	27 00	
	71 55	
		1,269 44
Total Expenditures* of the Seventeenth Fair,		$7,246 92

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* In the foregoing sum of $7,246.92, are included the items of expenditure for the department of Agriculture, which have been extracted and sent to the Comptroller, as follows :

Rent of Niblo's Garden and Premises, $1,292.25—one third,	$430 75
Rent of Vauxhall Garden and erecting sheds,	181 96
Lumber, and carpenter's work for the Horticultural Room,	82 25
Gas Light, $309.15—one-third,	106 38
Printing Circulars, Blanks, Tickets, Reports and Addresses,	337 10
Night-watch for Horticultural Room,	17 00
Steam power for putting in operation agricultural machinery,	171 88
Advertising,	27 75
Expenses in Horticultural Room,	312 07
Clerk, door-keeper and laborers at Cattle Show,	36 00
Mounting agricultural show-bills,	5 75
Silver Cups,	276 00
Gold and silver for Medals, and striking,	118 63
Engraving,	58 25
Medal Cases,	5 25
Diplomas, and filling up,	13 50
Cash Premiums,	70 00
Books for Premiums,	121 15
	$2,371 67

Expenditures of the Repository of the American Institute from March 31, 1844, *to February*, 1, 1845.

Salary of Superintending Agent,	$1,250 00
" " Clerks,	800 00
" " Recording Secretary,	100 00
Services Secretary of Farmers' Club, preparing Reports, &c.,	87 00
Collector,	16 10
Messenger,	6 00
Rent of premises 187 Broadway,	50 00
Insurance on Library,	15 00
Painting book cases, tables, &c.,	38 00
Plastering,	13 50
Advertising,	31 43
Newspaper Subscriptions,	42 07
Books for Library,	196 61
Binding books,	4 20
" Transactions of the American Institute,	85 00
Printing circulars, blanks, &c.,	33 25
Stationery,	22 37
Fuel,	40 25
Lighting—camphine and candles,	28 30
Repairs of stoves,	28 40
Expenses of Agent to Albany,	26 31

Expenses of Plow to Royal Agricultural Society, of England,		$2 00
" and books, to London,		29 50
Engraving wood cuts,		5 00
Silver cup, and engraving,		8 00
Settlement of old claims: George Nowlan, expenses of Plowing Match at Harlem, in 1839,	$25 00	
Coleman and Stetson, being balance of supper during the 16th Fair, 1843,	43 00	
		68 00
Petty cash book expenses,—postages, cleaning, repairs, &c., P. C. B., page 161 to 194,		148 04
Total expenses of Repository,		$3,175 33

Recapitulation.

Receipts.

To cash received from Jan. 20, 1844, to Jan. 20, 1845, including balance on hand at the date of last Report, April 4, 1844,	$13,218 17	
be received from Comptroller,	950 00	
		$14,168 17

Expenditures.

By disbursements: Balance of claims 16th Fair, 1843,	$94 44	
disbursements 17th Annual Fair, 1844,	7,246 92	
disbursements Repository and Library,	3,175 33	
		10,516 69
Balance on hand,		$3,651 48

Repository American Institute, New-York, February 1, 1845.
By order,
JAMES TALLMADGE, *Pres't.*
Gurdon I. Leeds, *Rec. Sec'y.*
T. B. Wakeman, *Cor. Sec'y.*

STATEMENT

Of the Receipts and Expenditures of the American Institute of the City of New-York, from 1839 *to* 1844, *for Agriculture, Commerce, Manufactures, and the Arts:*

RECEIPTS.				EXPENDITURES.		
Repository Year ending April.	State of N. Y. Act May 1st, 1844.	Annual Fairs.	Total.	Repository year ending April.	Annual Fairs.	Total.
1840, $1,692 82	....	12th. 1839, $8,831 41	$10,524 23	$3,472 91	$7,631 41	$11,104 32
1841, 1,993 86	....	13th. 1840, 6,581 25	8,575 11	3,426 25	5,128 30	8,554 55
1842, 1,622 50	$950 00	14th. 1841, 7,050 00	9,622 50	4,239 00	5,571 31	9,810 31
1843, 1,339 64	950 00	15th. 1842, 6,741 75	9,031 39	2,889 83	5,825 75	8,715 58
1844, 1,259 00	950 00	16th. 1843, 8,808 80	11,017 80	4,011 32	6,247 52	10,258 84
Feb. 1845, 1,625 45	950 00	17th. 1844, 10,249 71	12,825 16	3,154 73	7,246 92	10,401 65
$9,533 27	$3,800 00	$48,262 92	$61,596 19	$21,194 04	$37,651 21	$58,845 25

The documents accompanying the foregoing Report were very voluminous—consisting of,

I. Opening Address of the 17th Annual Fair, by the Hon. Luther Bradish.

II. Anniversary Oration, by the Hon. A. H. H. Stuart, of Virginia.

III. Report of the Board of Managers of the 17th Annual Fair.

IV. Reports of Committees on awarding Premiums.

V. List of Premiums awarded at the 17th Annual Fair.

VI. Communications from contributors.

VII. Proceedings of the Farmers' Club.

VIII. Proceedings of the National Convention of Farmers, Gardeners, and Friends of Agriculture, held at the Repository of the American Institute, on the 11th and 12th October, 1844.

IX. Proceedings of the National Convention of Silk Culturists and Manufacturers, held at the same place on the 9th and 10th October, 1844.

X. Conversation Meetings of the American Institute.

XI. List of Animals, &c., exhibited at the 17th Annual Fair.

From these documents, the following selections have been made, by the advice, and with the concurrence of a committee appointed for that purpose by the American Institute.

Extracts from the Report of the Managers of the 17th Annual Fair of the American Institute, 1844.

The Premium Committee have received eighty-eight written reports from the Judges in the various departments of Agriculture, Manufactures, and the Arts.

The whole number of competitors were 1,953; of these, 717 have been entitled to the following awards, viz :—

20	Gold Medals.
29	Silver Cups.
104	Silver Medals.
444	Diplomas.
$150	in cash, special awards.
36	Copies Transactions of American Institute.
6	“ Colman's European Agriculture and Rural Economy.
7	“ American Agriculturist.
8	“ New-York Farmer and Mechanic.
5	“ Transactions State Agricultural Society.
8	“ Cultivator.
11	“ Bridgeman's Gardeners' Assistant
2	“ “ Fruit Cultivators' Manual.
2	“ “ Florists' Guide.
2	“ Farmers' Mine.
5	“ Farmers' Instructor.
3	“ Handbook of Plants.
2	“ Productive Farming.
1	“ Farmers' Manual.
4	“ Brown's Trees of America.
3	“ Prince's Treatise on Fruit.
1	“ Prince's Treatise on the Vine.
2	“ Downing's Cottage Architecture.
1	“ “ Landscape Gardening.
4	“ Kenrick's American Orchardist.
1	“ Lindley's Theory of Horticulture.
1	“ Hovey's Magazine.
2	“ Loudon's Ladies' Flower Garden.
1	“ American Flower Garden Directory.
2	“ Buist's Rose Manual.

120 volumes.

The amount actually received at the door of Niblo's Garden, was $9,678, which would pay for the entrance of 38,712 persons. To this number must be added, those who either of right or by courtesy were admitted free—to wit : the members of the Institute and their families,—the contributors, who were provided also with some additional tickets,—United States, State, and Corporation Officers,—the Judges, and Delegates from other Institutions, and distinguished men from all parts of the Union—Charitable Schools, &c. And to these must likewise be added, the very large number who gain admittance by the transfer or loan of tickets, and other deceptive modes, which, from the peculiar arrangement of the premises it was impossible to guard against. A comparison was made on several days, between the estimated number of persons who passed into the garden, and the receipts at the door on the same days. It was found that not more than one out of five paid for admission, which accorded with the opinion previously expressed by the door-keepers.

This conclusion is reached upon the best authority of which the case admits, and would prove that 154,848 persons had visited or attended the Fair. An allowance must be made for the frequent entrance of contributors, managers, and other attendants. These facts will sufficiently explain, why so many persons should have entered the garden, and the receipts be so small.

REPORTS OF COMMITTEES.

Report on the Plowing and Spading Matches, October, 1844.

" These interesting scenes took place at Fordham, in Westchester county, N. Y.—access to the field was by the Harlem railroad.

The president of the company furnished tickets free of charge to all the officers, agents, and committees of the Institute.

The Rev. Mr. Powell volunteered his beautiful field. The plowing was deemed to be of a very high style of excellence,—the ground was surveyed, and marked off in lots of one-eighth of an acre each, and the order in which they were drawn by the competitors was as follows :

No.	Name.	Residence.	Team.
1	Matthew Rae,.....	West Farms, N. Y.,......	pair horses.
2	John Savage,......	" " "	" oxen.
3	John Rae,.........	Morrisania, "	" "
4	John Brewster,.....	English neighborhood, N. J.,	" "
5	Lewis G. Morris,...	Fordham, N. Y.,.........	" "
6	Oliver Cromwell, ..	" "	" "
7	(Withdrawn.)		
8	Henry Mooers,.....	Ithaca, N. Y.,...........	" horses.
9	C. Bathgate, jr., ...	Morrisania, do.,..........	" "
10	Jeremiah Tiers,....	Yonkers, do.,..........	" oxen.
11	Cornelius Bergen,..	Brooklyn, do.,..........	" horses.

"The competitors started off in gay style, and accomplished their work in a less time than was expected, and in an admirable manner.

The teams dropped out in the following order: No. 4, first; No. 9, second; No. 11, third; No. 6, fourth; Nos. 2, 3, and 10, (nearly together,) fifth; No. 8, sixth; No. 1, seventh; No. 5, last.

No. 8, was a side hill plow; No. 9, Mr. Burrall's wheel Plow; No. 11, Mr. Bergen's own Plow.

No. 4, did the work in 19 minutes; No. 9 in nineteen minutes 5 seconds; and the longest time was 30 minutes.

The Judges awarded the Premiums as follows:

1st Premium, Silver cup, to John Rae.
2nd do. Silver Medal, John Brewster.
3rd do. Diploma, Oliver Cromwell.

Good Plowing, Diplomas to Charles Bathgate, Jr., and Henry Mooers.

There were some animated speeches made on the ground, by citizens of our State, and by a distinguished Farmer from Virginia, Mr. Harnsburger, and by Mr. Ellsworth, of Connecticut.

The Spading Match, being the first ever held in this country, attracted unequaled attention. It was difficult to clear the ground for the active and practical gardeners, who were in sharp action for the prizes. It had never fallen to our lot to see such a skillful and rapid turning up of the turf by that instrument.

The following persons entered:

Matthew Roche, Westchester, Westchester co., N. Y.
John Brewster, English Neighborhood, N. J.
John Lodge, Morrisania, Westchester co., N. Y.
James Angus, West Farms, " "
Thomas Elmer, West Farms, " "
Wm. P. Lodge, Hunt's Point, " "

The excitement could not last long, for the gardeners turned off their lots of 200 feet square, each in the following order.

1st, Matthew Roche, in 23 minutes, Silver Cup.
2nd, Wm. P. Lodge, in 30 " Silver Medal.
3rd, Joseph Lodge, in 34 " Diploma.

After finishing this interesting contest of Plow against Plow, and Spade against Spade, those citizens who belonged to the city, were conveyed home in the Harlem Railroad in one hour.

(Signed,) JAMES BATHGATE, *Westchester co., N. Y.*
SAMUEL HARNSBURGER, *Virginia.*
L. G. MORRIS, *Westchester, N. Y.*
E. S. SHONNARD, *Yonkers, N. Y.*
H. MEIGS, *New-York,*
Committee.

TESTING OF PLOWS.

The committee to whom was referred the testing of the traction of the plows entered for competition at the 17th Annual Fair of the American Institute, report that there were a large number of plows entered, but they were withdrawn, except numbers 1, 2, 3, 6, 7 and 8, which were tested in a wet and rather tough green sward soil with Chase's Dynamometer.

No.	Name of Plow.	By whom entered.	Avrg. width and depth of furrow.	Average draft or traction.
1	Bergen Plow, ..	C. Bergen,.........	12 by 6	310
2	" " ..	W. Bigelow,......	12 " 6	260
3	" " ..	A. Hawley,.......	12 " 6	310
6	Myers' " ..	C. Bergen,.........	12 " 6	400
7	— " ..	C. Bathgate, jr.,...	12 " 6	350
8	Cleazy's " ..	Jon. Eastman,.....	12 " 6	500

If the ground had been in good condition, the plows could have been operated with a less power.

Your committee award the first premium, Silver Cup, to William Bigelow, for the best plow.

Second premium, Silver Medal to Corn's. Bergen, second best plow.

EDWARD CLARK, *Chairman.*

REPORT ON THE FARM OF GEN. JEREMIAH JOHNSON.

To the American Institute:

Your Committee lately visited the farm of Gen. Jeremiah Johnson, which is situated in the 7th ward of the city of Brooklyn. The farm contains one hundred and forty-five acres, of which about sixty-six are under cultivation. This is the only farm on Long Island remaining in original hands, and has been cultivated by its present owner sixty years. He has long since given up the cultivation of ordinary field crops, finding it more profitable, from its proximity to a ready market, to raise garden vegetables; and as there is more land than he wishes to manage himself, he rents twenty-six acres, in various lots, to gardeners. He has fourteen tenant houses, which are small, neat dwellings, mostly occupied by those who hire garden spots from him. His dwelling is an old fashioned double house, one and a half stories high, with two wings, and is eligibly situated, having an extensive view of the East River, and parts of the cities of New-York and Brooklyn. The gardens, as they should be called, rather than the farm, are under the superintendence of Mr. Barney Johnson. He employs about twelve hands in the summer, and three in the winter. His stock consists of six cows, six horses,—which are kept in the best order,—and a sufficient number of hogs for family use. His land is kept in the highest possible state of cultivation. He informed me that they had not used less than one thousand loads of manure this year. On his premises are cow stables, which he rents to milkmen. He has the liquid manure from those stables, in which are kept, on an average, two hundred cows. This manure runs through open drains to an artificial basin, in the centre of which is placed a pump, high enough for a wagon to pass under. This wagon is furnished with a tight box, in which the liquid is pumped. It is then drawn on the land; by raising a fixture it can be discharged, and as it runs over a board about a foot wide, placed there for the purpose, it is evenly spread. He never puts this on his growing crops; great care seems to be necessary in the use of this, as well as other manures; and there are many examples to be seen on this place, of the evil effects of an excessive use of manure. We were pleased to see this, for here were no kinds of manure employed, except what are of acknowledged benefit. Many of those manures which have been recently recommended, have been used elsewhere, with the most discouraging and ruinous consequences, when the quantity was excessive, while small quantities were followed by the most flattering results. Any particular manure, then, should be properly employed, before it is condemned. This liquid, which we were speaking of, is sometimes left to remain until its watery particles evaporate, and then it assumes a consistence which enables them to remove it to another basin, and it is there mixed with weeds and other rubbish from the farm, and also with manure purchased from the city; but very little stable manure is purchased. He prefers the street manure from New-York, and estimates it according to the part of the city from whence it is brought. General Johnson prefers the street manure, because it is more suitable to his soil,—not on account of its containing less foul seeds. He thinks that the seeds which manure contains are destroyed by the heating and rotting of the manure, and attributes the abundance of weeds in cultivated lands, to the seeds which exist in the land,—believing that they may remain there in a latent state more than twenty years. To destroy the first growth of weeds, so injurious to such tender plants as carrots, onions, &c., he considers it a good plan to prepare the ground for sowing the seeds, then to cover it with a good coating of rubbish, which should be burned, then the seeds of the weeds, and also furnishes a good top dressing of manure for the young plants.

He cultivates most of the vegetables sold in the markets; but his principal crops are rhubarb, cabbages and beets. He has four acres of rhubarb, and prefers the common to any of the improved sort; at least, they appear to do best on his land. He manures his ground well; in the spring plows between the rows, and when fit pulls off the stems for market. He pursues this plan until currants and gooseberries are fit for market, and then lets the plants grow undisturbed. The great crop of leaves, some of which are eighteen inches broad, are suffered to fall on the ground, which they do after the first severe frost. He has about six acres of cabbages, and calculates each acre will produce five thousand heads. He plants them three feet one way and two the other, to allow cultivation, which is done with the plow and hoe. His beets are very fine. He calls them the long red French beets. We saw some pulled which measured two feet long, and three or four inches in diameter ; they are a fine tender table beet.

He has only one acre in orchard at present. He had ten acres of the choicest grafted fruit, but nothing short of shooting would prevent his fruit from being stolen, both from the trees and after it was picked; consequently the trees were cut down and burned. He has some fine plums ; the trees are very healthy and bearing abundantly. The only care they get is such as is necessary to keep a neat and clean door-yard, in which they stand, in order. He destroys the canker worm with a swab dipped in tar, with which he rubs off as much of the nests, while the worms are in them, as possible. His fences are in the best order. They are, where most exposed, tight board fences, about five feet high. The gates are furnished with a hook, and also with a chain and padlock, and are always kept *locked*, when they are not drawing in or out, which saves all anxiety about their being left open *accidentally* for the admission of pigs and cattle. His barn has been built fifty years ; it is covered at its sides and roof with cedar shingles, which were covered with a coating of hot tar. The roof, although it has been on fifty years, appears now like a new covering. Here can be seen thorough tilling of the soil, and what land can be made to produce, and also how much better it is not to undertake to cultivate more than can be well attended to. Although Gen. Johnson rents out part of his farm, he literally cultivates *all the rest*. I saw the third crop growing this season upon a border, under a fence, which on most places goes to waste. All his head lands, and the grounds along his fences, have some kind of crops growing on them. His maxim is to cultivate his crops at a proper season, keep them well tilled, free from weeds, and use *plenty of manure*. He considers this the most *economical* kind of farming and gardening.

All of which is respectfully submitted.

HENRY A. FIELD,
Chairman of Committee.

New-York, *Oct.* 25*th*, 1844.

REPORT ON THOMAS BELL'S FARM.

The Committee on Farms beg leave to report that they have visited the farm of Thomas Bell, situated on Randell's Island. It consists of one hundred and seventy-five acres—forty of which is salt meadow, and the remainder improved land and cultivated in general field crops. Mr. Bell rents this land from the corporation of this city, and as he holds his lease only from year to year, he is deterred from extending his operations and improvements according to his superior judgment. He cultivates his farm for profit, and your committee were pleased with the minute calculations he makes upon every thing which relates to his productions, and with the business-like manner that all his operations are conducted.

MEADOWS.—He has ridged his land where it was wet and cold, and in this manner very much increased his crop of excellent grass, and exterminated many weeds which before were a great annoyance to him. He cuts his hay and pastures his meadows in the fall. His fall grass is of great use to him for his milch cows, and as a compensation for the loss he sustains by fall pasturage, he gives his meadows a top dressing of manure every spring; in this way he generally gets an average crop of two tons of hay of the best quality to the acre. He has cut this year eighty-five tons of first quality hay, besides considerable of salt hay and sedge grass, which answers a good purpose for bedding for his cattle, &c.

Grain Crops.—Mr. Bell raises wheat, rye and oats; sows the two first after potatoes; sows the grain in the fall, and seeds down in the spring; would however sow his timothy seed in the fall, but his occupation of the land is so uncertain that he pursues this plan. His plan is to plow twice, sow his seed—using two bushels to the acre—and then harrowing slightly, leaving the ground as rough as possible. He thinks that the earth, by the action of the frost, crumbles down, and covers the exposed roots and feeble plants in the winter and spring, very much to their advantage.

Fruit.—His orchards yield a handsome income. He has sold this year $350 worth of cherries; last year $400 worth of first quality apples; $150 of second quality of apples; $200 of early apples.

Stock.—He has some full blooded Durham cows, and young stock. Mr. Bell took several premiums for his animals at this Fair, and therefore it is unnecessary to give a description of them. He has some fine half bloods from Mr. Emmet's Durham bull, and his choicest milking cows.

Dairy.—He keeps forty cows, which average eight quarts of milk daily the year round. His cows are pastured six months, and tied in their stalls only to be milked, and are fed six months on half a bushel of cut hay, four quarts meal, and four quarts ship stuff, twice daily. His hay is cut by Green's Straw Cutter; one man can feed this machine, and cut a bushel easily in a minute, and can cut enough for forty cows in about fifteen minutes. He feeds his cows in tubs, and when a cow leaves her feed it is immediately taken from her; in this way nothing is lost. They are secured by means of a light chain hooked over their necks; at the other extremity is a ring, which is secured to a round standard, and so arranged that it can move up and down with ease at the cow's pleasure. The stables were kept very neat and clean. The cows are curried regularly daily, and turned out; after which the stables are always swept clean, and the manure removed to the compost heap. His cows are always selected for their quality, without regard to price, and he adopts the plan of fatting those that are not extraordinary milkers, and purchasing fresh cows to supply their place. His Durham cow "Shakeress" is an extraordinary milker; she took the first premium at the late Show; she milks thirty-three quarts daily, after calving, for two months, and averages fifteen quarts daily for the year. He has a building near his pump 10 + 15, and fifteen deep; in one part is a well eighteen inches deep; this is supplied with water from the pump; all the waste water during the day passes in this well, and when it arises to the height of eighteen inches it passes off by a waste pipe. With a tackle and a pair of hooks his cans are lowered in this well, and are cooled. It takes only fifteen minutes to cool a can. By this excellent plan, he is able to milk his cows in the evening, to let them and his men have their natural rest, and send fresh cool milk to the market in the morning.

SWINE.—Cross of the Berkshire and unknown breeds. They are a splendid lot of pigs, showing the value of a good breed from the fact that they have kept fat upon the run of the farm, without any extra care, or feed.

SHEEP.—He has only five ; they are the Leicester breed, and took the first premium at the late Show. Their fleeces averaged nine lbs. each first clip.

POULTRY.—Mrs. Bell has been very successful in raising poultry. Beside common barn-yard fowls, she has a fine flock of geese, and also seventy-five turkeys, which she raised from three hens. She feeds the young turkeys on milk curd and Indian meal.

POTATOES.—His principal crop for profit is potatoes ; he manures his ground with sixty cart loads of manure to the acre, spreads his manure broadcast, plows his ground, and plants in hills. Seven acres yielded fifteen hundred and thirty-two bushels, this year, of early potatoes. He thinks he can obtain more merchantable potatoes from hills, but a greater quantity from drills.

All which is respectfully submitted.

MARTIN ELLSWORTH, *Ch'n.*

New-York, October 23d, 1844.

REPORT ON S. B. TOWNSEND'S FIELD OF WHEAT.

The committee on field crops report that they visited, at the request of S. B. Townsend, Esq., of Newtown, L. I., in June last, a field of wheat containing two acres.

The soil is of a mellow, sandy loam, and had, previously to being sown, been plowed and harrowed in the usual manner, and manured with sixty bushels of poudrette to the acre.

The field had been very uniformly sown and cross sown with white flint wheat, at the rate of two bushels to the acre, which cost, at the time of sowing, twenty shillings per bushel. The yield was thirty-five bushels of wheat of sixty pounds, or twenty-one hundred pounds to the acre, and was very liberally disposed of by Mr. Townsend to his neighbors, at the rate of ten shillings per bushel.

The kernel had been slightly attacked by a small fly, at the time your committee visited the field ; but the grain had advanced so far that it appeared to suffer little or no injury ; they therefore recommend early sowing—say as early as the 10th of September.

This field of wheat was remarkably clear from weeds, and from its high state and careful cultivation, merits the premium of the American Institute.

All which is respectfully submitted.

JEREMIAH JOHNSON,
EDWARD CLARK,
D. JAY BROWNE. } *Committee.*

New-York, Oct. 20th, 1844.

REPORT ON PETER HULST'S FIELD OF CABBAGE.

The committee on field crops report: That on invitation they visited a farm in the town of Williamsburgh, L. I., cultivated by Mr. Peter Hulst. The soil is of a sandy loam, with oyster shells in a partial state of decomposition, thickly intermixed. There were twenty-five acres of this farm covered with cabbages in the proportion of 5,000 to the acre: but the field particularly examined, contained about five acres, and twenty-five thousand cabbages of a most extraordinary size. Twelve were selected, which weighed as follows: 34 lbs. 34, 42, 36, 36, 34, 34, 44, 35, 34, 39, 34—436 lbs. 36⅓ lbs. average weight of each. There were many others in the field, and also in an adjoining one, which were planted at a later period, but which appeared to your committee as large as the above average. They therefore recommend the premium of the American Institute to be awarded to Mr. Hulst.

All which is respectfully submitted.

JAMES TALLMADGE,
EDWARD CLARK,
T. B. WAKEMAN,
Committee.

New-York, October 21st, 1844.

REPORT OF THE COMMITTEE ON INDIA RUBBER GOODS.

Since the report of last year there have been many improvements. In the last report the estimated capital then employed was $120,000. We now give the names, location, number of operatives, and capital employed, as near as can be ascertained at this time.

Name.	*Location.*	*Operatives*	*Capital.*	
Naugatuck India Rubber Co.,..	Naugatuck, Conn.	60	$150,000	
Leveret Candee's Factory,.....	New-Haven, "	40	30,000	Shoes.
Hotchkiss & Merriam, ...	" "	50	30,000	Suspenders.
Lewis & Co.,................	Naugatuck, "	35	25,000	Shoes.
D. Pritchard & Co., ...	New-Haven, "	20	15,000	Suspenders.
Russell Manufacturing Co.,....	Middletown, "	70	100,000	"
J. F. Tomlinson, ...	Newtown, "	15	15,000	Clothing.
Litchfield Manufacturing Co.,	Litchfield, "	10	10,000	Mittens.
D. L. Suydam,...............	New-York city, ...	200	100,000	Suspenders.
City India Rubber Company, ..	Providence, R. I., ...	30	40,000	Shoes.
Hartshorne Company,.........	" "	50	25,000	"
Horace H. Day, ...	New Brunswick, N. J.	50	10,000	General.
Onderdonk, ...	" "	5	3,000	Shoes.
John Thornley, ...	Philadelphia, Pa.	10	5,000	"
Hutchinson & Renyon,........	New Brunswick, N. J.	20	10,000	Variety.
Bishop & Co., ...	" "	25	10,000	"
Smith & Son, ...	New-York city, ...	15	20,000	"
		705	$598,000	

There are also a number of small establishments about the country employing from two to five hands each.

This estimate shows an increase of capital employed since the last report of over $400,000, but it must not be understood that this is the actual increase since that time, as in fact there were some of the above mentioned establishments in operation at the date of the last report. It is certain that this branch of trade is rapidly increasing, and that most of the goods that have been produced by these manufactories during the past season, have found a ready sale, and at fair living prices. We do not think it proper to state here the profits arising from this branch of manufacture; but it is enough to say that they are second to none other in the United States. We would also observe that public attention has been much directed toward this branch of domestic manufacture during the past year.

We would invite your attention particularly to the newly invented article of Shirred Goods. This article is said to have originated with Charles Goodyear, Esq., and by him patented in the United States and all of Europe. Mr. G. has spent a number of years of incessant toil to bring this article to perfection; he has accomplished it, and is entitled to the thanks of a discerning public, and the highest premium that can be awarded by the American Institute. It is an invention of vast importance to the country, and there is no doubt that when the wants of our own country are supplied with this article, a vast quantity will be exported annually, for it is an article that is brought into daily use among all classes of society.

The next article worthy of particular attention, is the specimen of Floor Cloth. This article will ultimately take the place of Painted Floor Cloth, and we hope and trust that within the next twelve months, the foreign painted Floor Cloth cannot be imported against this domestic and far superior article; it can be afforded much cheaper than the common painted cloth, and offers to every housekeeper a good, serviceable American article. This is also an invention of Charles Goodyear, and has cost him much time and money to perfect.

The next article worthy of attention, is the fabric for Maps and Charts. This only wants to be seen to be appreciated, for it will be of vast importance to our army and navy, public offices, postoffice department, schools, &c. &c.

The Shoes manufactured under the Goodyear patents, are decidedly the best and most beautiful article ever manufactured in this country. We would here observe that it has been impossible for the manufacturers of Sheet India Rubber Shoes to supply the demand this present season, although the prices have advanced about 10 per cent. This demand is not owing to any short supply of the imported Para Shoe, but arises from the preference given to the manufactured shoe; thus showing that this branch of the business is in a healthy and prosperous condition. The manufactured Sheet Rubber Shoe, has been in all our American markets for some five years, therefore the public have had sufficient time to decide upon the merits of this article. To prove that the public generally give the manufactured Sheet Rubber Shoe the preference, is to say that the manufacturers are and have been unable to supply the demand; and it is not only the American public that appreciate this domestic article, but thousands of them might be found packed snugly in the baggage trunks of Englishmen and Frenchmen to be taken home by them, as a beautiful specimen of American manufacture.

This trade is rapidly on the increase. Lewis & Co., of Naugatuck, intend turning out from their establishment this season, not less than five hundred pairs daily. We were told by the agents of this manufactory, that they had received orders from two houses in a neighboring city, for twenty-five thousand pairs to be shipped by the first of January next. The average market price of these shoes, is one dollar and five cents to the trade. We mention this as only one instance. Other manufacturers have their orders for the article faster than they can supply them.

We would also call your attention to the manufacture of the article of Suspenders, under the Goodyear patent, by our much esteemed and worthy citizen, D. L. Suydam. This gentleman has stepped forward and purchased the right to manufacture this article, for which we understand he pays some $30,000, and from which he will without doubt reap a rich harvest. Mr. Suydam has now in his employ about 200 females in his establishment, thus giving to many worthy persons the means of gaining a living for themselves and others dependent upon them for support. We consider the manufacture of these suspenders entitled to your highest consideration, for the workmanship is fully equal to any French manufacture.

There are others that manufacture this style of goods in this city on a limited scale, and of a very beautiful style. So far as this branch of trade is concerned, we can only say, the supply has not equalled the demand.

The Russell Manufacturing Company at Middletown, Conn., manufacture suspenders of India rubber, but not under the Goodyear patent—they make them after the French and English styles, and furnish a very superior article. The machinery used by this company is said to be of American invention and make. There are others that manufacture what is called English and French elastic webbing, but all on a limited scale. This branch of the manufacture is in a very prosperous condition. The article of imitation patent leather, made under the Goodyear patent of gum elastic, bids fair to become a very important branch of this manufacture, and is worthy of your particular attention. It is an article that is brought into daily use in almost all branches of trade, and is likely to supersede the patent leather in this country.

There are also the gun covers, cartridge cylinders, sword belts and mail bags. It is only necessary for us to say, that the general government after testing these articles, have given large orders to the Naugatuck Company, (the only manufacturers of the above,) for the different articles for the use of our army and navy. These are also manufactured under the Goodyear patent, as are also a number of other useful articles which we do not at this time particularize, but which are worthy of attention, such as duck for sails, riggings, roof coverings, &c. &c.

To show the importance of what are termed the Goodyear inventions and patents, some enterprising merchants of high standing in this city, have offered Mr. Goodyear $100,000 for one-half of the right of his patents for gum elastic composition, not before however examining minutely into every branch of the business. Their sagacity shows them that this is yet to be an important business, and those best acquainted with it foresee that almost every article manufactured under these patents will soon be in demand for exportation to almost every country. We should not be surprised that if in the course of three years the thousands of capital now employed in this manufacture, should swell to millions of dollars. Neither have we any doubt but that we have some one in our own land who will produce caoutchouc, equal if not superior, to that imported from South America and the Indies. The climate of some portions of Florida as well as the soil, is similar to that of South America, where the caoutchouc tree is raised; and if not found to exist here at the present time, there can be no doubt but what it could be easily cultivated in the marshy grounds of our southern States.

It was shown by the report last season, that about 250 persons were employed in the different India rubber establishments in the United States. We now show that there is not less than 700, making an increase of 450 in one year. The precise number of operatives we have not been able to ascertain, as many of the manufactories refuse to give the required information—but it is hoped another season every manufacturer will send to the American Institute a statement of the number of hands employed, amount of capital, products, &c., as it can do them no harm, and is of much importance to those interested in the progress of American manufactures.

We think enough has been shown to satisfy the American public, that the manufacture of India rubber goods is rapidly on the increase;

and another important feature of this business is, that it gives employment to females mostly, and is a dry, light, and pleasant labor.

All of which is respectfully submitted.

HENRY L. NORRIS, } *Committee.*
S. T. ARMSTRONG, }

New-York, October 20th, 1844.

REPORT ON COLT'S CARTRIDGE.

The undersigned having been appointed by the American Institute a committee for the purpose of testing and reporting their opinions in relation to the invention and the practical use of Mr. Samuel Colt's water-proof cartridge, submit the following report:

That for the purpose of fully testing the cartridge, they met, on the 16th inst., on Governor's Island. The gun selected was a brass six pounder,—the inventor of the cartridge loading the piece. The gun was fired *forty-five times* with the ordinary percussion lock and wafer,—a priming wire, or pricker, not having been used during the firing. *Fifteen rounds* were fired in *four and a half minutes*, without sponging the gun or serving the vent. The gun was then examined and sponged, and was found to be in a fit situation to proceed with the experiments. Ten rounds were again fired in *two and a half minutes*,—when, for the purpose of testing whether any deposit had been left in the gun which would ignite a cartridge, one was driven home, and allowed to remain *one minute and a half*,—when the experiments were resumed, and *eighteen rounds* fired in *five minutes*. The forty-fifth cartridge was then driven home, and allowed to remain five minutes, for the purpose of testing if the heat of the gun was sufficient to melt the foil, or cause a discharge. We however became well satisfied that any number of cartridges might have been fired with similar results. Several musket cartridges, which had been under water for three weeks, were examined by us, and the powder found to be fit for immediate use. A musket cartridge was covered with dry powder—and the powder burnt without injury to the former.

The result of the experiments have fully satisfied us, that not only great economy of labor and time is saved, by the use of Colt's cartridge, but the danger to those in charge of the gun greatly diminished. We believe also, that it can be packed with greater advantage and with more safety, than any others we have seen. The cartridge can be introduced with great advantage for musketry, and the heavy cartridge-box be dispensed with. Armies, too, after fording streams, will find their ammunition ready for immediate use.

One advantage the cartridge possesses, is that, in the use of them, the time of sponging the gun, picking and tending vent, is gained,—and at least one-third more discharges from the battery can be made, than by the present mode. We cannot say how these cartridges will bear transportation in the ammunition carts, or cassoons, as no experiment has been made. They are proof against damage from water. Several of the six pound cartridges have been kept in water for three days, and are as explosive as they could otherwise have been.

After mature consideration of all their advantages, we recommend with confidence the invention; and we predict the time is not distant, when Colt's water-proof cartridges must be brought into general use.

JAMES BANKHEAD, Col. 2nd Regt. U. S. Artillery,
JAMES M. M'INTOSH, U. S. Navy,
ABRAHAM GODWIN,
J. E. UNDERHILL,
Committee.

COMMUNICATIONS FROM CONTRIBUTORS.

STATEMENT FROM R. L. PELL.

Pelham Farm, Dec. 1st, 1844.

In compliance with the request of the board of agriculture, I herewith send a description of my mode of cultivating cereal grains, for which premiums have been awarded me.

In the year 1842, on the first of September, I prepared a lot of land containing twenty acres, for wheat, soaked my seed, which was the white flint, weighing sixty pounds to the bushel, in strong brine for four hours—it was then drained through a sieve, and spread thin upon the barn floor, when a dry composition was sifted on it, and was sown at the rate of three bushels to the acre. Three hundred bushels of oyster shell lime were distributed over the field per acre, and the whole harrowed in together—two men followed the harrow, one sowing at the rate of a bushel of clover seed, and the other half a bushel of timothy seed, to the acre, after which the ground was twice harrowed, and rolled. The wheat grew luxuriantly during the season, and presented throughout a perfectly healthy green appearance. Adjoining I sowed a field containing ten acres, with the same kind of wheat, in a dry state, but did not lime the land; it grew well until it blossomed, after which it appeared sickly. When the grain was formed, insects attacked it, and the crop was totally destroyed. The straw was covered with rust, and unfit for any purpose except manure. I cut the wheat on the twenty acre lot in the milk, commencing on Monday morning—on Saturday it was ground into flour—the grain weighed 64½ lbs. to the bushel, and was awarded the premium of the American Institute as the best of forty-three parcels exhibited.

It was supposed by many farmers that so large a quantity of lime, as 300 bushels to the acre, would have injured the land—it being a sandy loam; the grass seed grew finely, and has yielded since, three tons of hay per acre.

In 1843, I sowed thirty acres with prepared wheat, and top dressed it with charcoal dust. It grew rapidly, and was not attacked by rust, mildew, or blight, when fields near it were almost destroyed—a small portion of the lot which had received by accident a large supply of charcoal dust, produced at the rate of seventy eight and three-quarter bushels to the acre. I cut it when the straw presented a yellowish appearance, four inches above the ground. At that stage of its growth, a milky substance could be expressed readily from the kernels, by gentle pressure of the forefinger and thumb. It was allowed to remain three days on the field, when it was carried to the barn, and threshed out immediately. It weighed sixty-four pounds to the bushel, and sold for twelve and a half cents above the market price by weight. A few acres were left standing, and cut three weeks after, when the farmers in the neighborhood harvested their wheat. The grain was small, shrivelled, and weighed fifty-six pounds per bushel. The straw had lost its nutritious substances, was much lighter than that cut earlier, and consequently less valuable. I believe after the stem turns yellow near the ground, there being no connection between the root and tassel, the kernel wastes daily. By early cutting you preserve to the straw nearly all its saccharine matter, and thus render it almost as valuable for fodder as hay. If the straw could be returned immediately to the field, and plowed under, it would, in my opinion, be a more valuable manure, than if converted into excrement, by passing through the animals, for this reason: By the analysis of Sprengel, it contains potash, soda, lime, magnesia, alumina with a trace of iron, silica, sulphuric acid, phosphoric acid, and chlorine: in passing through the animal, it assists to form the whole animal economy—and, as manure, is devoid of a large portion of all the substances named. The grain contains precisely the same substances, in different quantities. To prove this, I sowed some wheat on a pane of glass, and covered it with straw, not allowing any earth to come in contact with it. It grew as well as if it had been sown in earth, but was unfortunately destroyed by accident before it came to maturity. In France the experiment succeeded fully.

In 1844, on the 9th of October, I cleared the tops from a potatoe field, burnt them, and returned the ashes with a view of sowing wheat. The seed was then prepared thus: soaked four hours in brine that would buoy up an egg—scalded with boiling hot salt water—mixed with pearlash—passed through a seive—distributed thinly over the barn floor, and a dry composition sifted on it composed of the following substances: Oyster-shell lime, charcoal dust, oleaginous charcoal dust, ashes, Jersey blue sand, brown sugar, salt, Peruvian guano, silicate of potash, nitrate of soda, and sulphate of ammonia. The sun was permitted to shine for half an hour upon it, when the particles became as it were chrystalized upon the grain; in this state it was sown at the rate of two and a half bushels to the acre, directly on the potatoe ground, from which the tops only had been removed, and plowed in to the depth of five inches with a Scotch plow, harrowed once, a bushel of timothy-seed sown to the acre, and harrowed twice. At the expiration of fifteen days the wheat was so far above ground as to be pronounced by a neighbor far in advance of his, which had been sown on the first of September, in the usual manner, without any preparation. Contiguous to it I sowed wheat prepared, on carrot and turnep ground, the tops not having been removed, and plowed the whole in together, with like success; and still adjoining, I sowed three bushels to the acre in a dry state, on potatoe ground—plowed and harrowed first; wheat sown, and twice harrowed. The first parcel, although plowed in to the depth of five inches, was two and a half inches high before the last appeared above ground.

The following composition, of my own compounding, was then spread by hand broadcast over the whole, at an expense of three dollars per acre: Stable manure, dry charcoal dust, hickory wood soot, bone dust, oleaginous charcoal dust, oyster-shell lime, decayed leaves, leached ashes, unleached ashes, guano, sal-soda, nitrate of potash, fine salt, poudrette, horn shavings, refuse sugar, ammoniacal liquor, blood, sulphuric acid, magnesia, plaster of Paris, plaster from walls, ground—decayed grass, decayed straw, decayed weeds, fish, refuse oil, seaweed, oxide of iron, and oxide of manganese—my object being to contribute to the growing crop every substance required for its growth. By Sprengel's analysis, all cereal grains—peas, beans, carrots, potatoes, turneps, clovers and grasses—contain chlorine, potash, phosphoric acid, soda, sulphuric acid, lime, silica, magnesia, oxide of manganese, alumina, and oxide of iron; with the exception of wheat, which has no oxide of manganese, and but a very small portion of iron.

On the 29th of October, I sowed at the rate of eight bushels of wheat to the acre, on sod ground, plowed it in beam deep, and harrowed it four times; the result will be given next fall. If these experiments should result favorably, the farmer will be enabled to use his corn, carrot and potatoe ground, which is always left in the best possible tilth by those crops, for wheat or rye, instead of allowing it to remain idle, as is the present custom, until the ensuing spring.

RYE.—I usually soak this grain in salt brine six hours, roll it in quick lime, and several other substances composing the grain and straw; sow it at the rate of three bushels per acre, top dress it with composition, when two and a half inches above the surface of the earth; cut it in the milk, and thresh it with the flail in the winter; it weighs sixty pounds, and has for the last two years taken the premium at the American Institute. A portion of the field left, and cut when the straw was perfectly brown, when threshed, yielded grain weighing fifty-six pounds to the bushel.

It is a crop that should never be sown in a young orchard, as it will inevitably destroy it—at least such has been my experience on a sandy loam. I imagine the disease called ergot—a sort of fungus—so detrimental to human life, to which in some locations it is subject, is poisonous to trees, as well as mankind, many thousands of whom have been killed by using it for bread; it makes an excellent food for cows early in the spring; I have sown it in May with corn and oats broadcast, and used it advantageously for soiling cows and young cattle; they should be fed sparingly at first, or hoven may ensue.

Oats.—I always sow this grain in the month of April, on ground plowed in the fall, and generally use the potatoe variety. I sow from three to five bushels to the acre, harrow twice, and roll twice this year, 1844. I tried the following experiment, with a field of ten acres. When the grain had grown four inches above ground, I sowed by hand my composition upon it broadcast, at an expense of three dollars per acre; contiguous I sowed a ten acre field at the same time, but did not use any composition: the oats on the first field grew six feet high, and produced at the rate of seventy two bushels to the acre: while those in the adjoining field grew only eighteen inches high, and yielded at the rate of thirty-two bushels. The difference in the growth was observed by Mr. A. B. Allen, Editor of the Agriculturist, and other gentlemen. They were cut in the milk, the straw being brown four inches above the ground. They weighed forty-four pounds to the bushel, and received the first premium of the American Institute. The straw, being full of saccharine matter, was equal to the first quality of hay for fodder—when stacked, it was salted at the rate of half a bushel to the ton. In gathering the crop, some oats were left upon the field, which ripened, and as the field received a second manuring with the composition, to benefit the young grass, grew rapidly, filled out, and matured their seed, before frost set in; a sample of which, is in the hands of the Board of Agriculture. I think the straw of the potatoe oat is almost one-third heavier than that of the common kind. The only objection I have to the variety is that its husk is very hard.

Corn.—This crop is cultivated on my place, planted in drills, twelve inches apart in the drill—drills thirty inches from centre to centre—the seed planted after having been soaked fourteen hours in strong brine, and rolled in composition; composition is likewise spread upon the kernels, and the whole is covered by the plow. When six inches high, the earth is plowed from the corn, after five days a composition is spread upon the drills, and the earth is plowed to the corn again; which is all the tillage it requires. When glazed, and while the stalk is still partially green, it is pulled up by the root, struck smartly against the toe, and laid down by the side of the operator; another man follows with a team, and carries it off from the field; it is then put in stack, where it remains four weeks, when it is husked, placed upon the barn floor, dried perfectly and cribbed; the stalks are drawn under cover and salted; thus, during the winter, root and stalk are converted into manure, and the ground left in perfect order for winter grain, which is immediately sown, and the field seeded down to meadow, appearing like a summer fallow. The stalks, at that stage of their growth, are full of saccharine matter, and exceedingly nutritious for stock; the dirt adhering to their roots is also grateful to the animal in winter. Every farmer has noticed that his horses and neat cattle will search for a spot of earth in the barn-yard, after it has been some time covered with snow, and eat it with apparent pleasure. Corn, ground with the cob, makes good food for stock. Last season my gardener soaked a few kernels in sulphate of ammonia from two to twenty-four hours, planted it in pots of prepared earth, and placed it in a hot bed. Those grains which hadbeen soaked twenty-four hours grew one inch in twenty-four hours after planting—when six inches high they were set out in the open ground and grew to the height of seventeen feet four inches—specimens of which were exhibited at the State Agricultural Show at Poughkeepsie; seeds of the same corn without any preparation grew six feet high. I sowed a large field broadcast for soiling, which was found indispensable, between the seasons of harvest and aftermath. Still as a food in the green state, it was found inferior to old hay—owing to the large per centage of water it contained.

Buckwheat.—This is a crop which will grow on any moderately rich, sandy soil, and is capital food for horses and cows, if crushed. It contains by analysis, *alum*, *silica*, *carbonate* of *potash*, *carbonate* of *magnesia*, *sulphate* of *potash*, and *carbonate* of *lime ;* and is, consequently, a valuable crop to plow under, for manure. I have on two occasions improved a field vastly, requiring those ingredients in larger quantities than it possessed, by turning under a crop of buckwheat, when forming the seed. At that period it had lost much of its water by evaporation. In 1843, I permitted a neighbor to sow a seven acre field on my farm, with buckwheat. He used one and a half bushels of seed to the acre. At the same time, I sowed an acre near him, using only sixteen quarts. His one and a half bushels of grain yielded him thirty bushels of grain, and an immense quantity of straw. My sixteen quarts yielded me sixty-five bushels of grain, and a moderate quantity of straw,—evidently showing that a small quantity of seed only, is required to produce a heavy crop. It is supposed by some, that buckwheat plowed under, will sour a soil,—such has not been the result in my experience. This crop I always cut before the grain has actually turned brown, and while many of the kernels are still green ; the straw may be dried, stacked, and salted for winter provender ; I find it more to my advantage to spread it upon the barn-yard ; if so used, it is unnecessary to be very particular after cutting it,—especially if cut ripe,—as the kernel never injures, even if the straw should become moldy ; the nearer it approaches that state, the more easily it may be threshed. The usual practice in the State of New-York, is to thresh it on the field, —which plan cannot be too highly censured,—flour made from such grain, is always gritty, and consequently unhealthy. Philadelphia buckwheat flour always bears a higher price in the New-York market, than our own. The probability is, they thresh in their barns.

Carrots, Mangel Wurtzel, and Sugar Beets.—These crops require a deep, rich, sandy soil, rather retentive of moisture. I always plow very deep—throw the ground up into ridges, two feet apart, and sow the seed on the top, after soaking it from ten to fourteen hours in strong ley,—and before planting, roll it in composition until the seeds separate. It is sown by hand, and a dry composition, containing eleven different substances, forming the component parts of the roots, spread upon it,—when it is covered with the hoe.

As soon as the plants grow to the height of five inches, they are thinned to nine inches apart, and the ground plowed from them, which eradicates weeds and mellows the soil. After an interval of five or six days, it is returned to them again ; and if, by accident, any of the plants are covered with earth, they are released and set up by a man who follows the plow with a hoe. During the summer, they are frequently examined, and if attacked by insects, are immediately limed ; if the ground is clean, they will require no more attention ; if foul, the same process of plowing from, and to, must be persevered in.

When ripe, a plow is run beam deep on each side of every drill, which operation exposes the root : men follow with sharp knives, lift the roots and cut off the tops which are left on the field, and plowed in with wheat, as before described. Roots so cultivated will yield at the rate of eight hundred bushels to the acre.

Potatoes.—By the analysis of Sprengel, the roots and tops of potatoes contain respectively, as carried from the field in ten thousand pounds.

	Roots.	Tops.
Potash,	40.28	81.9
Soda,	23.34	0.9
Lime,	3.31	129.7
Magnesia,	3.24	17.0
Alumina,	0.50	0.4
Oxide of iron,	0.32	0.2
Oxide of manganese,	——	——
Silica,	0.84	49.4
Phosphoric acid,	4.01	19.7
Chlorine,	1.60	5.0
Sulphuric acid,	5.40	4.2
	82.83	308.4

I have copied the above analysis to show how requisite the use of lime and potash is in the growth of the potatoe crop, and particularly as a top dressing—the plan having been abused by non-readers. The past summer by the use of those substances, combined with charcoal, my gardener, Mr. Cunningham, raised at the rate of nine hundred and ten bushels per acre; from three potatoes cut into sets, he produced three bushels.

In the year 1843 I planted a field of several acres in drills, harrowed the ground level, and top dressed it with two hundred bushels of lime and charcoal dust to the acre ; the yield was 432 bushels per acre—variety Pink Eye Kidney. At the same time the potatoes throughout my neighborhood were decayed; likewise a parcel of the same kind, planted contiguous to the above, not limed, were also decayed.

This year, (1844,) I planted the same seed in the following manner: the ground was thrown into drills and manured heavily; the potatoes were cut into sets of single eyes fourteen days before required for planting, and covered with plaster and lime—a few, for the sake of experiment, were not so covered. At the expiration of the time specified, they were sprinkled with small, almost imperceptible globules, having life, and were consequently rejected—those limed were free. I planted them in drills on the manure nine inches apart—tops, centres and ends separately, to mark the difference in growth. The potatoes in the first three rows, three hundred feet in length, were covered with dry charcoal dust. Second three rows with oyster shell lime.

Third three rows with bone dust.
Fourth " " poudrette.
Fifth " " unleached ashes.
Sixth " " new mown grass and plaster.
Seventh " " fine salt.
Eighth " " silicate of potash.
Ninth " " guano.

And so on throughout the field, each alternate three rows with a different substance, except six rows in which I planted the same seed on the manure, without any composition. And adjoining them, six rows of French potatoes, received three weeks before directly from France; the furrows were then all reversed by the plow, and the potatoes covered. After which a heavy stick was drawn by a pair of horses across the furrows, to level them. The potatoes covered with dry charcoal dust, No 1 came up first.

No. 6, covered with new mown grass and plaster, ... second.
No. 8, " " silicate of potash,............... third.
No. 9, " " guano,........... .... fourth.
No. 3, " " bone dust,...................... fifth.
No. 4, " " poudrette, ... sixth.
No. 7, " " fine salt,...................... seventh.
No. 5, " " unleached ashes,............... eighth.
No. 9, " " oyster shell lime, ... ninth.

The twelve rows without composition came up later than any of the rest. When four inches high, the ground was plowed from them—and after an interval of six days, plowed to them again, the field being in perfect order. They required no other attention during the season. On the third of October they were plowed out, and proved to be perfectly sound with the exception of the twelve rows planted with Pink Eye Kidney and French potatoes without composition, which were entirely rotten.

Six hundred bushels were pitted immediately, and not examined before the 5th of December, when they were found to be perfectly sound. During the summer I examined fields in Dutchess, Ulster, Albany and Schenectady counties, and invariably found insects with numerous legs ensconced within the withered vine. In some instances a small worm, not unlike the apple worm, but red, and very minute: the conclusion I came to, was, that these insects fed upon the albumen requisite to form the perfect potatoe—and consequently when dug it was either wholly decayed, from an excess having been abstracted—or if apparently sound, so much had been taken, as to produce decay by degrees—thus, after having been stored, a sort of fungus appeared upon the potatoe, and the decay is then rapid. From the above investigation, I believe, as I before stated in a conversation with Mr. A. B. Allen—as mentioned in page 354 of the December number of the Agriculturist, that the universal decay throughout the country, is caused mainly if not wholly by insects—and that lime, or any substance obnoxious to them, will, if used in sufficient quantity, preserve the plants until they come to maturity.

THE HOG.—I have on my farm an orchard containing many choice grafted sweet apple trees, planted expressly for hogs—this is the principal food on which they are fed during the season; sometimes, by way of change, they receive sour apples—always given raw—at regular hours—the food is occasionally varied once a day, by adding garden refuse, such as cabbage leaves, cauliflower, &c., together with the slop from the house. Unless so fed, a more expensive animal can scarcely be kept—especially in a part of the country where corn can be sold from 62½ to 75 cents per bushel, and other grain in proportion. This is a luxury my hogs never partake of—and fatter animals, or more beautiful pork cannot be produced. It may lose a little in boiling; if it does, however, I have never noticed it; the loss, at all events would not equal by one-half, the difference of cost fed on corn, if the crop is raised expressly for their food. They are very prolific, producing at a birth numbers varying from six to twelve twice in each year, if found desirable by the owner. Vanlau made a calculation, showing that in eleven years, a single sow—averaging each litter at six pigs, formed ten generations, or 6,434,838 pigs. He further observes that were the calculations extended to the twelfth generation, the result would be as great a number as all Europe could support—and extended to the sixteenth generation would people the globe. When my sows are pregnant, they are kept apart from other hogs—at the birth of the young pigs, they are removed for a few hours from the dam, as they are in danger of being injured by her motions. She is fed judiciously for the first five days—after which she is allowed a full quantum of food three times each day—and never overfed. Her troughs are cleaned after every meal, her pen cleansed daily—and kept constantly littered with fine broken straw. The pigs are early accustomed to feed on milk mixed with bran, and at the age of two months weaned. They are always kept in confinement—their daily occupation is to convert rubbish into manure, a supply of which is constantly thrown into their apartments. My second brood of pigs are sent alive to the New-York market, where they usually bring a high price, and are sold to the packets as roasters. The store hogs are wintered chiefly on sugar beets and carrots, occasionally boiled potatoes—and once a week charcoal dust, which keeps them in perfect health. Their legs should occasionally be rubbed with a corn cob, to open the pores, and cause the blood to circulate freely—otherwise staggers may ensue.

I fatted two hogs, the year before last, entirely on sweet and sour apples, fed alternately, for four months; they received no other food of any description—water, even, was denied them. They weighed when killed, two hundred and fifty pounds each—the whole hog was covered with a very thick layer of fat, perfectly white and firm—the skin was thin, and the pork pronounced by connoisseurs exceedingly fine and sweet. The hams were not inferior to Westphalia, notwithstanding they use one pound of sugar to three of salt in curing them. They will keep perfectly well all summer if placed in a barrel, and completely covered with pulverized charcoal dust. I have kept them during two summers and a winter in this manner.

CALVES.—When my calves are intended for the dairy, they are allowed to run with the dam five months—and she is well fed—having a meal of bran, independent of her daily allowance. At the expiration of the time specified, the calf is taken from the mother, and turned into a small field, well covered with fine grass—but not allowed water; the dew is sufficient to quench her thirst; if permitted to drink freely, they become bloated and mis-shapen.

Calves intended for the butcher, are taken from the dam when one hour old, and fed upon her milk, mixed with fine Indian meal, for three or four weeks, when they are sold; if left with the cow twenty-four hours, it is difficult to learn them to drink from the pail—and the cow forms an attachment to them, the remembrance of which lasts for several weeks, causing her much anxiety and restlessness—whereas if deprived at once, she never misses them, and becomes immediately docile yielding her full quantity of milk. If a bull calf, and it is intended to raise him, he should have the use of two cows, running with them, for six months—after which he may be fed the milk of one cow, mixed with tepid skim milk and Indian meal, with fine hay, for six months. By this treatment, although expensive, he will gain more in one year, than by the other mode in two—he will be very powerful and fully compensate his owner for extra feed.

OXEN should be fed on dry cut hay and corn meal, occasionally ground with the cob, and oats, all summer. I find by such treatment, their flesh becomes firm, and their constitution strong, so much so that they will endure labor equal to the horse, and will work during the whole season, without intermission, except on Sunday. I have fed them on grass all summer; the consequence has been that they required rest at least two days in the week, and when put to hard labor protruded their tongues from their mouths and evidently suffered much. The reason I suppose is, that green grass contains 80 parts of water, in 100 parts—whereas the hay, having parted with the water, eaten, comparatively speaking, in one-third the bulk—yields to the animal starch, woody fibre, phosphate of lime, albumen, sugar &c., and thus strengthens him to endure much fatigue. The ox is a patient, quiet and sensible animal—and may be taught to perform many of the horse's duties—when old may be sold for beef, and is consequently a much cheaper animal to keep on the farm, than the horse.

HORSES.—My horses are kept up the year round, and are never allowed to eat grass, or any green crop. They are fed twelve quarts of oats daily, and a certain quantity of hay; occasionally their oats are ground with a little corn, cob and all. They are allowed as much salt, ashes and sulphur as they will eat unmixed with their food ; and as much water as they will drink. Once a week, during the apple season, they are fed a few apples ; when cider is made, pomace is given them.

Very respectfully yours,
R. L. PELL.

HOPS.

Morrisville, N. Y., January 15*th*, 1845.

Sir—At your last exhibition, I exhibited a sample of hops. I have been growing hops for the last thirty years, and I find the soil best adapted to them, is such as will produce the best crops of grass —particularly timothy. To prepare one acre of land, I put on fifty loads of barn-yard manure, (manure taken from the yard of a distillery is better ;) spread it all over the ground,—then plow it three times,—drag it, and fix it in the best manner for a crop of corn ; I then furrow it, eight feet apart both ways ; I then put in four pieces of hop root, each six inches long,—when the furrows cross,—and cover them about three inches deep ; I then plant the ground with corn, in the usual way,—being careful to have the hop hill occur between the hills of corn,—and hoe the hops, same as the corn, during the season ; I then harvest the corn in the usual way, and when all is removed, I put four shovels full of manure on each hill of hops, and continue to manure them every succeeding fall, in the same way.

You will see by the above, that an acre will contain about 660 hills, which will require two poles to a hill, of twenty to twenty-five feet long. I find cedar the best timber for poles. You will see that I get no hops until the second year. Then I plow among them, and hoe them as I do corn. In the month of April, I put two poles to each hill, about a foot apart at bottom, leaning the tops forward, and leaving the hop hill between them, and put two vines up each pole, as soon as they grow long enough to wind once round, and tie them with woolen yarn, and wind them with the sun ; all other vines starting, must be kept down. The crop is usually ready for picking about the 10th of September, which is done as follows : The vines are cut off about four feet from the ground ; the pole is then taken down, and laid across a box, where the pickers stand to pick them from the vines ; they must be put up for the drying kiln, the same day they are picked ; the kiln of usual size, is eighteen by thirty feet, —is made, the first story, of stone or bricks, about nine feet from the ground to the first floor, which is timbered with joist, as common buildings, and a floor laid of lath two inches square, with a space of two inches square between them ; the floor is then covered with stout cloth, such as is used in the dairy for straining ; there should be four eighteen inch square holes at the bottom of the walls, to let in sufficient air,—and the building, above the floor, should be provided with large windows, which are to be kept open during the process of drying. In such a kiln, there should be eight charcoal fires, made at the bottom, at equal distances, which are to be kept steadily burning while the hops are drying; spread them ten inches deep on the cloth floor, and not move them until the steam is done rising, when they should be gently stirred until they are dry. After the hops begin to sweat from the heat below, I put on to the fires four small kettles, containing one-quarter of a pound each, of roll brimstone; and when it is consumed, add another one-quarter each, until I give three-quarters of a pound to each kettle. I find that brimstone improves the color of the hops, dissipates that strong vine or leafy smell, which they always have without it, and which is to be detected in any article of which the hop is an ingredient. In good seasons, an ordinary crop is fifteen hundred pounds to the acre. I sold my crop this fall, for $172.50.

Very respectfully,
EZRA LELAND.

BARLEY.

Holyoke Spring Farm, Lynn, Mass., Jan. 21*st*, 1845.

The Barley exhibited by me at the last Fair of the American Institute, was grown on reclaimed meadow; soil dark loam, 8 to 12 inches deep; subsoil, hard clay. In 1842 it was underdrained and a good crop of barley raised on the same field; about 40 barrels of fish, (cost 25 cents per barrel, delivered within one mile of the place) were spread on the stubble and plowed in, and a very heavy crop of round turnep grew in the fall. In 1843 it was planted with corn, manured in the hill with manure made under the barn, a small shovel full to a hill, and in June or the first of July, two fish were put by each hill and covered with a hoe. For the crop of barley, of which a sample was exhibited, no additional manure was applied. On the 15th of April, 1844, the corn hills were split by running a large one horse plow on each side of the corn stubble. The corn was not hilled up, but at the last plowing the furrows were turned towards the corn that the surface water might easily run off, the ground being flat. When plowed for barley, the ground was wet, but dried soon after breaking and without clodding. On the 18th it was fully dry, and was then harrowed across the furrows, tearing up the cornstalks and leveling the surface; some parts of the field were harrowed two or three times, and all so much as to effectually pulverize the soil. The seed was soaked from 12 to 18 hours in a solution of poudrette, (two quarts of poudrette to five gallons of rain water,) and all the seed that did not sink after standing about two hours, were carefully skimmed off. About one-eighth of an acre was sown with unsoaked seed, and the difference could be very easily distinguished; that from the soaked seed being more than a week earlier, while the straw was much longer, but there was no perceptible difference to the eye in the grain thrashed, though the whole crop is far superior to the grain sown. The quantity sown was something more than a bushel and a half per acre, harrowed in with a light harrow; two bushels timothy, three pecks red top, and six pounds of southern clover being brushed in both ways, and afterwards rolled with a heavy roller; it was then laid off in lands, the drain furrows cleaned out with a spade, and grass seed scattered over them—the grass looked remarkably well this fall. On the 23d of July we attempted to cradle the barley, but the straw was of unequal lengths, the heads very heavy, and even where it stood up well, as most of it did, the fingers of the cradle did not separate it sufficiently to prevent breaking off the heads and scattering out much of the grain. It was therefore mowed and left in the swath, on account of rain, till the 29th, when it was put into loose cocks, having before been lifted up to dry it, as it lay in the swath, but not turned, as it wasted very much. We thought it none too ripe when cut, but I am assured it should have been but a few days sooner. We were compelled by unavoidable circumstances to handle the grain two or three times; had not such been the case, we are confident it would have averaged 58 bushels per acre, and no doubt a single acre could have been selected that would have yielded upwards of sixty bushels. The seed was bought for two and four rowed; a small part of the yield was two, but the most of it was six rowed, little or none being four.

Expense of Culture.

Three and a half days labor, (half to this crop,) $5	$2.50
Seed	5.00
Harvesting	3.50
Threshing and cleaning 192 bushels at 5 cents,	9.60
Rent of land, three and a half acres,	35.00
Transportation to Boston	2.00
	$57.60
192 bushels at 75 cents	$143.62
Straw	35.00
	$178.62
Expenses	57.60
Profit	$121.02

Very respectfully,
(Signed) J. HAMMOND COGGESHALL.

STATEMENT FROM THOMAS BELL.

My farm contains in all about 145 acres, one hundred of which is upland, the balance salt meadow. In the management of it, I have not been governed by any particular rotation of crops. When the meadows run out, my practice has been to top dress, or plow them up in the fall, plant potatoes in the spring, and in the ensuing spring seed them down with oats or barley, taking care not to plow more than could be well manured. From the large stock that I have kept, I have always made enough manure for the wants of the farm. The amount of produce raised from the farm from January 1st, 1844, to January 1st, 1845, is as follows :—

Milk, from an average of 33 cows, 96,360 quarts, sold at 4 cts. per qrt.	$385.44
Hay from 90 to 100 tons consumed on the farm.	
Potatoes, 1,900 bushels, 1,530 bushels sold at 3s.	573.75
Oats, 400 " " 3s.	150.00
Apples, 300 barrels, " 9s. per brl.	337.50
Cherries, 9,500 lbs, averaging 3½ cts. per lb.	332.50
	$1,779.19

Having adapted my farm to dairy purposes, my object has been to obtain as much pasture and hay as would maintain the stock, of which I have kept about fifty head for the last three years without any other feed than that raised on the place from the 15th of April to the 15th of November. During the winter months, I have fed the milch cows as follows: Half bushel of cut hay, quarter of a bushel of bran, and four quarts of Indian meal, each, mixed together and made into slops, per day, with as much good hay otherwise as they would eat. Upon this feed, as much milk can be produced from a fresh cow as from the best of pasture in summer. And should the cow have been milked some time, she will generally get fit for the butcher, at the same time giving milk enough to pay for her feed.

Very respectfully,
(Signed) THOMAS BELL.
Randell's Island, N. Y., October, 1844.

STATEMENT OF JOHN P. HAFF.

Bloomingdale, N. Y., Oct. 20th, 1844.

At the last Annual Fair of the American Institute, I exhibited four different varieties of potatoes, raised from foreign seed. Three of the Veilotte varieties, the seed of which I obtained from France. The fourth variety is called Black Potatoe, and is from Nova Scotia. My reason for trying foreign seed, was owing in a great measure to other seed having failed or run out, and at the same time to guard against the disease which has prevailed to so great an extent in the country, called the dry rot. I have made the trial, and now report the result. The soil is clay, and in hot and dry weather very apt to bake, unless constantly moved by the plow and hoe. In preparing the ground, I had it well plowed and harrowed. In order to break the lumps, had i furrowed at four feet distant with cross furrowing. I then threw in each hill, before planting, a teacup full of shell lime, twenty bushes, of which I bought for one dollar, being five cents a bushel,—the poltatoes were cut into pieces of sets, then planted on the top of the lime and covered with the hoe. After the potatoe was well up, I gave each hill another teacup full of lime—I spread it well over the sure face, in the hill and around the plants—then plowed, taking care to mold the loose soil with the hoe around the plant, and at the samtime to cover up the lime. At the second plowing, I gave each hile a third cup of lime, in the same way as the first, and then let theml take their chance. In this way I had a good crop. My potatoes were free from worms, of good size, and smooth fair skin. My neighbors having the same soil had an inferior crop, and much eaten with worms.

Very respectfully,
(Signed,) JOHN P. HAFF.

NATIVE STOCK.

Harsimus, N. J., January 17th, 1845.

The native stock exhibited by me at the late Cattle Show of the American Institute held at Vauxhall Garden, and for which premiums were awarded for the best native cow and heifer, are of a breed not very common in this part of New-Jersey. I have owned the cow upwards of three years, during which time she has regularly milked at least ten months in each year—the average quantity of milk per day for the season is about sixteen quarts, and the yield of butter from the same is about two pounds—or about eight quarts of milk to each pound of butter. Her feed during the year is a good grass pasture for the summer, and the remaining part of her food is of a mixed character—chiefly good hay, with each day a little meal, beets or some trifle from the garden, when in season. When kept up, we have not observed any very methodical system in her food—except the daily quantity and quality sufficient to sustain her in good condition. And I may state that much less food will keep her in good order than is required for the half blood. I own in this respect my experience is somewhat different to the account given by others keeping the cross breeds. I have found her much superior to any half blood. She has each year been put to the best native bull we could select. Her stock is excellent—the heifer being her first calf, after she came into my possession, and what is stated about the cow is equally applicable to the heifer; they each fatten well on the common feed, with a little extra meal, beets or turneps. For dairy purposes in our part of New-Jersey, the native breed is considered much superior to any other.

Very respectfully,
JOSEPH CLOWES.

CABBAGES.

The farm of Lambert Wyckoff, Esq., of Bushwick, opposite the city of New-York, was the place where the cabbages were raised.

Twenty acres, or about that number, were employed in this crop. The largest cabbages were grown upon a green sward, about five acres. The ground was plowed in the fall of 1843, and cross plowed in the spring of 1844 ; harrowed until it was well pulverized.

The cabbage were raised under glass, and planted out about the middle of April.

Expense of Culture per Acre.

50 Cart loads of New-York Street manure, at 50c.	$25.00
2 days plowing, with a pair of horses and one man	6.00
3 days plowing and harrowing,	9.00
3 times plowing the plants,	3.00
3 times hoeing,	6.00
	$49.00

The plants were set at about three feet by fifteen inches apart, generally. We sold about four thousand heads from an acre—at about two dollars and fifty cents per hundred...........$100.00

Deduct expenses,........................ 49.00

Profit per acre,..........................$51.00

(Signed) PETER HULST.

New-York, Jan. 1st, 1845.

CLOVER SEED.

The Clover Seed exhibited by me was the small red kind. It was sowed with oats, without any preparation, about the 25th of April, 1843. The previous crop was corn, manured with twenty-five loads of barn-yard manure to the acre. The first crop of clover was taken off about the 1st of July. The second, from which the seed was taken, was cut the 3d of September, and was housed in about a week. The yield was nine and a half bushels from four acres. The dry season was injurious to the crop. The soil was a sandy loam—a small part of it was sown with plaster the last of May, at four bushels per acre—and a week after, perceiving there was a great difference between that sowed and the other, I sowed four to five bushels more on the other part, but not with so favorable a result. The land was worth sixty dollars per acre, and the seed probably $7.00 per bushel, and cost me $1.00 per bushel to get it cleaned, besides, taking it 15 miles. The yield of timothy was nine bushels from three acres, and a part was sold for $3.50 per bushel.

(Signed) WILLIAM H. BURR.

Westport, Conn., Jan. 15th, 1845.

SQUASHES.

Elizabethtown, N. J., Jan. 22d, 1845.

At the last Fair of the American Institute, I exhibited two squashes. The seed were given me by an acquaintance, who procured them at Patagonia while on a whaling voyage. The seeds, six or eight in number, were planted a year ago last spring—only one came up, that bore four squashes. I saved the seed of the largest, and last spring I planted six hills, from which I obtained thirty squashes. The two largest were the ones I exhibited at the Fair. The one weighed thirty-seven pounds and the other twenty-nine pounds. Having last spring changed my place of residence, it was late before my garden was prepared—the seeds were not planted until the first week in May, in a soil such as is common to the gardens in this neighbrohood, and without being manured. I have been told by practical gardeners, that were the seed planted earlier, and in a stronger soil, they would have attained double the size. I observed there were none others like them at the Fair, and I am inclined to believe there are few, if any others, like them in this section of the country. Those gentlemen who have used them, are of the opinion that they are superior to any other squash, either for pies, or as a table vegetable. They keep well in winter.

Very respectfully,

(Signed) WILLIAM BROWN.

ONIONS.

At the late Fair of the American Institute I exhibited a sample of white onions, the average weight of which were nineteen ounces—one weighed twenty-four ounces.

In the spring of 1844, I sowed the seed in drills about one inch deep, and twelve inches apart, in the month of April. The soil was reclaimed bog, or meadow, which was ditched and drained a few years ago. It was manured with horse dung, and some of the upland soil with a small portion of lime. If they had had a little more attention paid them, I think they would have grown much larger. In cultivating them, I used a fork and spade instead of a hoe, and when they began to form, I took a little stick and removed the dirt from around them. They were ripe early in September.

(Signed) ANTHONY COCKS.

Goshen, N. Y., Nov. 10th, 1844.

RED ONIONS.

An account of a crop of red onions raised on ten rods of ground, by David Jagger, of Runhead, Suffolk county, L. I.

The soil was a reclaimed swamp having sand carted on to the depth of from six to eight inches—has been under cultivation eight or ten years. Was planted to corn the two previous years, yielding about sixty bushels of shelled corn to the acre.

The manure used was three one horse loads of hog and horse manure, worth five shillings a load. It was carted on and plowed in about the first of April. Harrowed and raked off and sowed about the 10th of the same month. Sowed with a drill harrow, drills twelve inches apart—were hoed with a hand hoe as soon as the rows could be distinguished, and as often after as they needed it.

The whole cost of labor in plowing, sowing, hoeing and harvesting, at 75 cents per day,	$7.88
Seven ounces of seed, at 1s.,	.87½
Three loads manure, at 5s.,	1.87½
	$10.63

Amount harvested, 57 bushels, at 50 cents,	$28.50
Deduct expenses,	10.63
Profit of the crop,	$17.87

R. R. BAILEY'S METHOD OF RAISING CARROTS.

On the first of June I took sixteen bushels of soap boiler's ashes, with twenty-five loads of dirt from meadow ditches, with which I manured about a quarter of an acre of black shelly land. Knowing it to be a bakey soil, and being aware that long or green manures are obnoxious to tap roots, I adopted this plan to make the soil light. After twice plowing, on the 12th of June I sowed the seed, in drills one foot apart, and one inch deep. I gave them one flat hoeing, then thinned them to five inches, then I hoed them very deep with a stock hoe.

About the last of August I commenced digging for market. They were all of them larger than any I exhibited at the Fair. The produce of the quarter of an acre was 300 bushels—being the largest crop I ever knew raised in America.

Yours, very respectiully,

R. R. BAILEY.

Communipaw, N. J., Oct. 26th, 1844.

JOHN W. WOOD'S METHOD OF RAISING TURNEPS.

On the 10th of August the ground (a piece of sod of about a quarter of an acre,) was plowed up ; it was then slightly harrowed in the same direction as it was plowed. I then sowed broadcast five ounces of seed, and rolled it with a two-horse roll. After they were well up they were hoed twice. The product was 90 bushels, pulled up on the 6th of November. The circumference of many of them averaged two feet each. The expense of plowing, rolling, hoeing, taking up, seed, &c., amounted to $4.75.

I have invariably found that turneps, like almost all of that genus of plants, grow much better on fresh broken up ground, than on land that has been lately used for other crops, though it be well manured, and in a high state of cultivation. I would also state that if it is the wish of the grower to obtain good turneps, they must be well thinned out. I am fully convinced that by thinning them from 12 to 18 inches apart, they will produce more weight than 6 or 9 inches, as is usually done.

Respectfully yours,
JOHN W. WOOD.

Bloomingdale, N. Y., Nov. 1st, 1844.

CHRISTOPHER ALLEN'S METHOD OF RAISING CAULIFLOWERS.

The seed should be sown the first week in March in a temperate hot-bed ; in a northern aspect, in about a month the plants should be pricked out in a cool bed, with a slight protection until the first of May, then planted in the open ground two feet apart.

I have for fifteen years been very successful in raising cauliflower, and I find by experience that stony ground, with little manure, produces finer heads than land richly manured. It is quite unnecessary to land the plants from the time they are put out.

This year I have been very successful with potatoes. I recommend early planting—say about the 10th of March. On the 20th of June I had them for table use ; the kind—purple kidney.

Very respectfully,
CHRISTOPHER ALLEN.

Staten Island, Jan. 3d, 1845.

STATEMENT OF JOHN L'HOMMEDIEU, Jr.

BUTTER.

The butter for which I was awarded the premium of the American Institute, was made after the following manner : After straining the milk it is put into the pans, where it remains until it has become sufficiently thick, and ready for the churn. When it has undergone the process of churning, the butter is removed, and placed in a wooden bowl, which should be well scalded previous to using. After standing until it has become cold, the milk should be entirely worked out of it. Then wash it well with cold spring water ; put in about four ounces of salt to five pounds of butter ; work it well again, and it is ready for use.

(Signed.) JOHN L'HOMMEDIEU, Jr.

South Middleton, Orange County, N. Y., Nov. 20th, 1844.

R. PLUMMER'S METHOD OF MAKING CHEESE.

When the milk is perfectly cool, I add a small quantity of annatto, so as to give the milk a yellowish cast ; then put in the rennet, and as soon as it has had its full effect, then work with the hands until the whey separates itself from the curd, and then scald with hot whey to a proper consistency, and then salt with pure salt. It should be worked down with the hands until all the whey is out, before putting it into the press ; and then it should remain in the press at least forty-eight hours, so as to make the cheese perfectly solid. In all the process of manufacturing, it should not be hurried, but carefully attended to ; almost all the bad cheese is from negligence in making. The rennet should not be used until at least one year old, and then it should be perfectly sweet. Many dairies of cheese have been spoiled from using new and bad rennet ; it gives to the cheese a very bad flavor, which would be avoided by using old and sweet rennet. The cheese should be bandaged on the outer edge, and the outer surface should be slightly colored and kept well dressed until ready for market.

Very respectfully,

R. PLUMMER.

New-York, Jan. 1st, 1845.

SMITH'S CORN SHELLER.

This machine consists of a horizontal toothed cylinder six feet long, and one foot two inches in diameter. The ears of corn in the operation are confined to a part of the upper and rising side of this cylinder, by means of a cast iron concave extending the whole length of the machine, and being shoveled or let in the machine at one end, they are driven through, and the cobs discharged at the opposite end, while the grain falls below, being admitted on either side of the cylinder. The operation is governed by elevating or depressing the discharge end, which causes the machine to operate more or less upon them ; thus securing to the operator the power of finishing his work.

This machine is capable of shelling three hundred bushels of ears per hour.

F. N. SMITH.

New-York, Oct. 1844.

BRICK MAKING.

Coxsackie, N. Y. October 20th, 1844.

To T. B. Wakeman, Esq.,
Secretary American Institute :

Permit me to submit to the American Institute a few facts and observations for the consideration of brick makers.

I have no data by which to ascertain the quantity or value of the bricks now manufactured in the United States, except the sixth census taken in 1840, which is very incomplete, and in some instances totally incorrect. This census purports to give the value of brick and lime manufactured jointly, with the number of men employed. It is difficult to separate them, so as to tell the proportion of the value which should be set to each. But as far as my observation extends, the value set upon both will fall short of the brick alone, estimating them at four dollars per thousand, which I think a fair average. According to this estimate, the value of brick known to be manufactured yearly on the Hudson river alone, will exceed the value of the brick and lime manufactured according to the census in the whole State of New-York ; and the value of brick alone manufactured in the single town of Coxsackie will exceed by one-fourth all the brick and lime, as valued by the census, manufactured in Florida, Wisconsin and Iowa Territories. But the year 1840 was one of general depression in every department of business, and no department feels a depression more sensibly than the manufacture of brick, money being wanted more for other purposes than building. Estimating, then, the value of brick alone, manufactured at this time, to be equal to the value of brick and lime as given by the census of 1840, and valuing them at four dollars per thousand, we have two billions, four hundred and thirty-four millions, three hundred and forty thousand and five hundred bricks, amounting to the sum of nine millions, seven hundred and thirty-seven thousand, three hundred and sixty-two dollars; and estimating that it will take on an average, one man to every seventy-five thousand brick manufactured, we have employed annually in this branch of business, thirty-two thousand, three hundred and ninety persons. While every other branch of business, has been discussed, written upon and investigated in detail, this seems to have been entirely neglected. I have not been able to find either book, pamphlet or article giving any idea of the method pursued in this country, of manufacturing brick. And what little is found in reference to this subject in England and France, is foreign to the business, as carried on in the United States, and is of very little or no use to us. The stock out of which bricks are manufactured, varies very materially in different sections of country, and even in the same sections, the same banks sometimes containing different kinds of stock. In common parlance, all kinds of stock are called clay. Pure clay is a whitish substance, without taste and grit, and is rarely, if ever, found in a primitive state : but if thus found is very valuable, being the principle material for making fire brick, crucibles, &c.; it may be manufactured by a chemical process out of alum and potash. Notwithstanding this great variety of stock, perhaps it is not generally known that there is but one kind of clay, and it is, perhaps, seldom that the stock contains one-half, or perhaps, one-third of this article, and it is frequently the case there is but simply enough to operate as a cement for other substances; and I have known brick made out of stock which a practical chemist informed me contained but one-thirtieth part of clay, but the bricks were not of good quality. It would occupy too much room, and be of little practical benefit to go into nice chemical details of all the different ingredients composing the various stock for manufacturing brick, and I shall confine myself to a few facts.

Most persons judge of the quality of brick by their color, red being supposed to be of good quality. Red is the color most fancied for fronts; hence, stock that will color a beautiful red, is valuable for making what are called pressed brick, which are used for fronts of buildings; but the color has very little to do with the quality, for strength or durability; and the manufacture has as little to do with the color, as that has to do with the strength and durability. It is the prevailing mineral in the stock, that gives the color; when this is oxide of iron, the brick will be a beautiful red; but if this mineral be absent, and magnesia prevail, it will have a whitish color; and when copper prevails, a cream color,—the color varying according to the combinations of these and other minerals.

No regular system has been, as yet, adopted for the manufacture of brick. Brick-makers in different sections, operating in entirely different ways; so much so, that a skillful workman in one place, would be no better than an inexperienced hand, in another,—especially in that important part of the business, molding. In one section, the stock is tempered entirely by the physical labor of man, with a spade or shovel; in another, by the tramping of oxen, and sometimes horses are used; and in another with what is sometimes called a hedge-hog,—a round log with wooden pins, to the outer end of which are attached oxen or horses, by which means it is made to revolve round horizontally over the stock, in a circular pit; then, again, some use a large iron wheel, which is made to revolve on an iron shaft, in such manner as to run alternately from the outside to the centre, and back. But what is called the tub mill, or square tub with an upright shaft placed in the centre, in which are placed knives that pass through the stock, and a shaft or lever attached to the top, to which is attached a horse, is more generally in use, than any machinery for tempering mortar. The methods of molding, or forming the mortar into bricks in molds, are nearly as variable as that of tempering the stock. Formerly, the most common means used to make brick deliver from the mold, was water; but now, sand is more generally used; molding in water is entirely a different business from molding in sand,—and one skilled in the former mode, could not mold in sand without first learning. Then again, the manner of molding in sand at the north, is different from that practiced at the south; and the facility with which the work is done, varies as much as the manner of doing it. There is no general system of manufacturing brick,—the work is generally done in a rude manner, without the aid of machinery, by the physical labor of man.

Great exertions have been made, for many years, to make machinery for molding brick, and the remnants of machines to be found in brick-yards, in every place where the business is carried on to much extent, show that brick-makers have been liberal in seconding those exertions ; but it has been found to them, in many instances, a heavy bill of expense, without benefit ; and at this time, it is the general opinion of brick-makers, that no machinery can be used advantageously in the different varieties of stock used. But I apprehend that attempts have too frequently been made to make machinery to do too much. Much money has been expended in efforts to make machinery to mold brick out of dry or untempered stock, by means of very powerful pressure ; but the strong nature by which brick endure frost and weather, is put into them by *fire*, and not by *pressure* ; dry stock may be pressed together so as to look very solid and fair before burned ; but the excessive heat necessary to burn brick, expands them, and this expansion disjoints the particles, and the brick will not stand frost and weather. This, I believe, has been the general result, where experiments have been tried. If there is an exception to it, it must be owing to the peculiarity of the stock,—perhaps to the presence of some substance easily fused, which melts in burning, and cements the other materials together. But this is rarely found in stock used for making brick,—and were it even practicable to make brick in this way, it would require strong and powerful machinery, and consequently, too expensive for general use.

Much has likewise been expended to get up machinery for molding brick by steam and horse power. Machinery can be made to do almost anything, where the thing to be operated upon is uniformly the same, such as wood, iron, brass, cotton, wool, &c.,—but where it is variable, as the stock for making brick must necessarily be, sometimes stiff, and then more moist—then again having stone, as most stock has more or less, and it is rarely a bed of stock is found that it is entirely free from what are called clay-dogs. It is found extremely difficult to make it answer the purpose, for the reason that you cannot put judgment into a machine,—if the mortar is pressed into the molds too hard it will not deliver, and if not hard enough the corners will not be filled out. Where the motions are arbitrary, continually the same, thus far and no farther, and the stock varies as it necessarily will, much difficulty is experienced, and the brick made with this kind of machinery are generally very rough, and it is thought by many that nothing is saved in the expense, over the old way of molding by hand.

Recently a machine has been got up, which is in general use at Coxsackie, and used at Rochester, Boston, North Haven, Conn., and various other places, which seems destined from the rapidity with which it has been adopted, to take the place of all machines, and supersede all other means of molding mortar into brick. This machine is operated by manual labor—it is simple in its construction, very easy to operate—much liked by laborers on that account; it receives the mortar directly from the tub-mill as it is ground; no extra expense being necessary in fitting up a yard for its use—makes the brick of better quality than hand work, and with greater facility—and taking the place of skill, can be operated by a common laborer, which with the increased facility makes an important saving in the expense. It is only two years since it has been introduced, but sufficiently long to test its merits. It is found to work well in every variety of stock, being so constructed as to be instantly liberated from any obstruction by stone or otherwise, and it is found not to cost fifty cents a year to keep one in repair. It is certainly worthy the attention of all who are interested in the manufacture of brick. It seems to be a fact settled among brick-makers, that all stock must be tempered into mortar; that all means for molding dry or untempered stock, are utterly impracticable—and that the best, cheapest, and most convenient mode for tempering the stock into mortar, is the tub-mill I have before described.

I know of no place in the United States where brick are manufactured so cheap, and where the business is so well arranged into a system, as on the Hudson river, between the cities of New-York and Albany. Large quantities of brick are shipped yearly from this section to the various ports in New-Jersey, Connecticut, and Rhode Island, and sold at a handsome profit at a price lower than they can be made in those places, to the astonishment of those there engaged in the manufacture.

I will now describe a brick-yard, and the process of manufacturing brick in Coxsackie. The floor for drying, one hundred feet wide; the length governed according to the extent of the business; if not made on a clay foundation it should be faced with clay, and made smooth and sufficiently inclined to carry the water off freely after rain—say about fifteen inches. Along the lower line of this inclined plane is placed the pits or vats, made in the shape of a half moon—the straight side fronting the inclined plane. They should be equal in size to the one half of a circle, nineteen feet in diameter, and three feet deep—the bottom being six inches higher than the inclined plane, made water tight, and embanked to their top. In front of each pit, at the centre, is placed the tub-mill; each of these are planted at distances of eighty-five feet apart; on the opposite side of the drying floor, and adjoining it is the kiln-ground, on which is erected a burning shed—two rows of posts being set near thirty feet, and generally extended the whole length of the yard; on the top of these are plates which are kept from spreading apart by the weight of the roof by iron rods which connect them; two other rows of posts are set on either side of these, and about twelve feet therefrom, to form wings; these sheds are always kept covered except when the kiln is so hot as to endanger the upper roof, when the boards are slid therefrom on to the lower one or wings, and when the kiln is sufficiently cool, again replaced. The ground, after once being dried by burning, not being again permitted to get wet, all moisture which the ground contains, on which brick are set to be burned, must necessarily evaporate through the kiln, and takes fuel. The stock here is composed of clay, marl, and silicious earth--the prevailing mineral magnesia. It is situated in high banks, in rather a hard state; it is first plowed, and left to be thoroughly dried in the sun; when dry, scraped down to the foot of the bank, care being taken to have a sufficient quantity thus dried scraped into large heaps, to last through a spell of wet weather; a man, with a horse and cart, delivers it at the pit, dumping it so as to be handy to shovel in; a sufficient quantity of water is first put into the pit to soak half stock enough to fill it; the stock is then shoveled in, care being taken to spread it equally over the pit, so that every shovel full shall be thrown into water--the stock using up the water when the pit is about half full; the proper quantity of coal dust is then spread equally over it; water is then put in again in sufficient quantity, with the stock necessary to use it up, to fill the pit, every shovel full of the stock, as before, being thrown into the water, the stock coming as high as the water, and using it up when full; if it is properly filled it may be agitated like a great liver; it should then be left to soak about twelve hours, when it is fit to be shoveled into the tub-mill, which is one man's work, and the work of one horse to temper it—the mortar, as it is tempered, passing out of the tub-mill at the bottom in front, directly into the chamber of the molding machine. It is the work of one man to operate the molding machine, making six bricks at each impression, and the work of two hands to carry the bricks, six at a time, in a mold, and lay them on the floor to dry. Many millions have been made in this way at this place, and there is never less than ten thousand put up per day, with the four hands and one horse, and frequently many more. This is called the molding gang; it is their regular business from day to day to make the mortar, mold the bricks, and lay them on the ground to dry.

There is another set of hands whose business it is to take care of the bricks in the yard, set them in the kiln when dry, or bake them on the yard if necessary, on account of dull weather, to make room for the molding gang, and shovel the stock into the pits, filling them as I have before described. These are called yard hands; their work however is subdivided, so that as much as possible, each man shall continually do the same kind of work. Bricks are never taken from the yard until dry enough to set in the kiln; narrow boards are placed in rows on the floor running from the kiln towards the pits, on which the bricks are placed edgewise, in rows set loose, and nine or ten high, covered with saddles in case of rain; when dry wheeled to the kiln. Wheelbarrows made with the axle nearly under the centre of the foreboard, so as to throw the load on to the wheel. The kiln is set with forty to forty-five lengths of brick long, the bricks being set edgewise from forty to forty-five high—the arches for fires, two lengths of brick wide, and the benches between them three lengths. The kiln is cased with rough bricks, which when it is burned are taken off and put on another kiln, and by keeping them dry, which is easily done with a regular burning shed, with a little replenishing will case a great number of kilns. Kilns are frequently burned in this way, containing from five hundred thousand to one million of bricks. The kiln ground is kept clean, and the bricks wheeled in readily from the drying floor; while setting the kiln and the casing being taken off after burning, the kiln is easy of access by teams to take away the bricks. This plan of casing kilns is much preferred to that of building thick, heavy, stationary walls. The quantity of brick made in one season (about five months) per each man employed is about one hundred and twenty five-thousand; in all cases where the stock breaks up, in a hard, lumpy state, it should, if practicable, be dried and shoveled into water; the water buoys it up, and causes the lumps to dissolve; the effect is entirely different from that of putting the stock in first and then adding the water, but when the stock is soft in the bank like putty it should be put into the pit without drying, and the water then added. Drying the stock produces a similar effect to that of freezing; the sand used in the stock is added after it is soaked; while tempering, the quantity of coal dust from three pecks to one bushel per thousand, varying according to the stock. The use of coal dust or fine coal (worked into the stock the same as sand) has become universal on the Hudson river. It has been thought by some who were unacquainted with the matter, that the use of fine coal in this manner must injure the brick, leave them porous, &c. This, however, is a mistake, the quantity in each brick is very small. When brick receive that degree of heat necessary to vitrify, or put the stony nature into them, (though the heat has before expanded them) they contract, causing the kiln to settle; the coal being a mineral unites with and enters into the stock, and the contraction closes the pores; the brick are stronger and more solid than those made without coal, but it requires great skill in burning. No one ought to undertake to burn brick in this way without at first serving an apprenticeship at the business; vast quantities of brick were spoiled in learning the art; it is a trade by itself. I shall refrain from giving a description of the process, for the reason that it might induce some persons to try the experiment, and without a practical knowledge a failure would ensue and perhaps a heavy loss. The use of coal dust saves nearly one-half of the fuel; the time of burning about four and a half days. A very large yard has been established at Cambridge, Mass., on the plan I have here marked out. One hundred thousand bricks will be made on it daily next season. The process of making brick in every section of the country north of Pennsylvania, partakes more or less of the plan I have here laid down.

In Philadelphia, and throughout Pennsylvania, and the southern States generally, the process is very different. In Philadelphia, the stock is composed of clay loam, and silicious earth heavily impregnated with oxide of iron; the stock is tempered by manual labor with a spade or shovel; it is shoveled into a heap on the ground at the place where it is dug; water being poured on, it is left to stand over night; the next day made into mortar; a day's work to temper the mortar for two thousand three hundred—from thence it is wheeled by another man, sometimes a long distance to the floor for drying, a narrow space of ground, adjoining which is a shed, under which the bricks are baked as soon as dry enough to handle. The mortar is dumped on to a table which is moved along the yard as the ground is covered with brick laid out to dry; another man molds it, the mold containing but one brick, (instead of six, as at the north,) each clod intended for a brick is rolled in loam sand; it is then thrown into the mold which has no bottom, being carried off by a boy; the mold being drawn quickly from the table, and at the same time turning it edgewise that the brick shall not fall out—2,300 being the day's work. The mortar made in this way is not well mixed, many small lumps remaining unbroken, and the common bricks though made in this slow manner, are not as smooth as many brick makers make them where six are molded in one mold instead of one, and where the quantity molded with the same number of hands is four times as great; but the beautiful red color they receive from the presence of oxide of iron covers up all defects. The stock in the vicinity of Boston, and many other places, make much stronger brick. Pressed brick, of which many are made in Philadelphia and Baltimore, are made the same as other brick, but when sufficiently dry to handle, they are put one at a time into a strong metallic mold in which they receive a powerful pressure, to make them straight and smooth; they are then handled carefully and burned the same as other brick. Many of this kind of brick are used in New-York city, there being little or no stock on the Hudson river, (where bricks are made for the New-York market,) that will color such a beautiful red, in consequence of the presence of magnesia in most of the stock, which renders it unfit for pressed brick. If some chemical substance, not too expensive, could be mixed with the sand used for molding, that would give the outside of the brick when burned a bright yellow, or straw color, they would be very beautiful for fronts.

Very respectfully,

A. HALL.

SILK CONVENTION.

Proceedings of the second National Convention of Silk Culturists and Silk Manufacturers, held at the Repository of the American Institute, in the city of New-York, October 9th and 10th, 1844.

The Convention assembled in compliance with the following call of the American Institute, entitled, an

Address to the Silk Culturists and Manufacturers of the United States:

We, the Trustees of the American Institute of the city of New-York, address you as known friends of the *silk cause* in this country. We have long been fully satisfied that the soil and climate of our country are eminently suited to the culture of silk, and that our people are abundantly competent to the manufacture of this precious commodity; and therefore, that this branch of Home Industry, can be extended as rapidly as correct information on the subject can be diffused; increasing and diversifying the employments, and augmenting the comforts of the people, and saving millions of dollars now sent abroad for silks, and lost to the country. By the use of appropriate means, we believe that in twenty to thirty years the silk products of this country may be made to enter as fully into the exchanges, and all the financial interests of the nation, as our cotton products now do.

With these views, and in accordance with the general designs of our association, established as it was to promote all the great interests of our country, it was determined a year ago to make a special effort to bring the silk subject before the public in a form to command confidence, and urge the whole business forward. We therefore, under the authority of the Institute, issued circulars, proposing a *National Convention* of silk growers and manufacturers, to be held in New-York during the *sixteenth annual Fair*. We also invited them to bring or send samples of their silk, raw and manufactured, for exhibition, and also to furnish the convention with written statements of their labors.

The results are before the public. The exhibition of silks constituted a prominent and most attractive feature of our Fair. In the convention we were happy to see delegates from the East, the West, the North, and the South, and that confidence in the essential merits of the silk business characterized all their deliberations, and the resolutions finally adopted. All their proceedings, together with numerous letters from all parts of the country, have been spread before the public in the form of a *report*, making a pamphlet of eighty pages of closely printed matter, double columns, embodying a vast amount of reliable information no where else to be found. One edition has been published in New-York by Saxton & Miles. In Boston the work has been stereotyped by T. R. Marvin, through the liberality of the Massachusetts Agricultural Society, and a few public spirited individuals, that it may be sold at a very low rate.

We are happy also to say that the Legislature of New-York has printed two thousand copies of the report, a part of the general report of the Institute, and that the newspaper press have aided much in spreading the facts thus collected.

In this way the movement has resulted in great good. Public attention has been arrested—much prejudice has been surmounted, and a very desirable measure of public interest awakened.

Our course is now a plain one. It is to follow up the good work so auspiciously commenced by a series of *annual conventions* and *annual reports*, to be continued as long as the interests of the business seem to demand. FACTS, FACTS, well attested FACTS, spread before the people, is all that is needed to make our widely extended country the greatest silk growing and silk manufacturing country on the globe. This consummation of our hopes can be secured. *It must be done.* We therefore announce a *second silk convention*, to be held at the Repository of the Institute, on Wednesday, Oct. 9th, at 10 o'clock, A.

M., and at the time of the *seventeenth annual Fair;* and we invite every grower and manufacturer in the United States to do three things:

1. Attend the convention.

2. To bring (or send, if you cannot come,) the best samples of your *cocoons, reeled silks* and *manufactured silks*, for exhibition ; for all which special accommodations will be provided, so that they may be seen and examined by the *hundreds of thousands* that will throng the Fair.

3. Make out for the convention a written statement of your labors in growing or manufacturing silk, or both, as the case may be ; and if it is out of your power to attend the convention, send it, so that it may be read to the attending delegates, and go into our next Report. Last year, we had from one hundred and fifty, to two hundred such statements, as our report shows. This year we hope to have ten times the number. To save room in printing, we wish to have the returns come in such a form to be put into statistical tables. You can, therefore, give us your answer by filling the blanks in the following schedules. If you cannot do it in this way, give us all the facts you have in your possession, in any form you choose.

In addition to filling the blanks as above, we wish you to make any suggestions, offer any remarks, state any fact that may occur to you, or any improvement in any part of the general business, which will be preserved in the body of the report. We would urge it upon the friends of this cause to hold county and other local conventions, and collect all the cases they can, large or small. We want small experiments, as well as large ones ; the more the better.

We would be glad to see in our report, the name of every man and woman engaged in the silk business in the United States. Gentlemen, it is for you and our country that we labor. We do not know of a single individual among all the officers or managers of the Institute, engaged either in the culture or manufacture of silk.

Help us in this great national work. Come to the convention. Above all, send us the facts, the facts desired.

In conclusion, we will, as we did last year, send a copy of our report to every person who will give us his experience in the business.

We will also send a copy to every newspaper editor, who will publish this circular, sending us the paper containing it. Will our friends see to it, that it is published in all the newspapers ? Address T. B. Wakeman, Corresponding Secretary of the American Institute, New-York.

In compliance with the foregoing call, the proceedings of the convention were punctually commenced, and witnessed the attendance of a good number of delegates from several different States of the Union. The meeting was called to order about half past ten o'clock, and Henry Meigs was called to the chair.

On motion, the following gentlemen were appointed a committee to nominate officers.

Rev. I. R. Barbour, of Oxford, Mass., Col. Clark, of New-York, J. G. Ward, of Fulton co., and J. H. Whipple, of Bennington.

The Committee then reported the following nominations:

Gen. JAMES TALLMADGE, *President*. Jas. A. H. Whipple, of Vermont; Geo. W. Murry, of New-Jersey; James Harrison, of Connecticut; J. G. Ward, of New-York; Samuel Church, of Connecticut; Isaac R. Barbour, of Mass.; Henry Meigs, of New-York, *Vice-Presidents*. Theodore Dwight, jr., of New-York, *Secretary*. Charles Nicholl, of Connecticut, *Assistant Secretary*. A. C. Van Epps, Lucius Cary, John S. Pierce, I. R. Barbour, J. G. Ward, *Business Committee*.

On motion, the report of the committee was adopted.

Gen. Tallmadge then proceeded to the chair, as President of the Convention; and before taking his seat, addressed the Convention as follows:

Having honored me by your choice, as presiding officer of this Convention, I beg you to accept my thanks. I frankly confess to you, that while this call is unexpected, the subject on which you are assembled is one for which I have great *feeling* and *interest*; and I beg you to believe, that whatever lies in my power to promote it, shall be done.

I have said before, and repeat it now, that the culture of silk is a branch of business for the prosecution of which, America is so well calculated by nature, that it will eventually excel Europe, and even Asia. Such are the peculiarities of the climate of this country, that the air is dry through that season in which the business is to be carried on; while in Europe it is damp, as is the case, also, in a great part of Asia.

A moment's reflection will explain the cause of this important difference. The prevailing winds, which are westerly, are dried, in America, by crossing the mountains, and blowing over extensive tracts of land; while, in the Eastern Continent, they come from the water. The same cause which here produces dryness, in Europe produces moisture; and this marked peculiarity must always affect the silk culture. It is unnecessary to remark farther on this subject, as the importance of this peculiarity cannot fail to be appreciated.

There is another fact equally important, and equally in our favor.

I think I can state without danger of mistake, that there is not a book published in the Italian or French languages, on the silk culture, which does not commence by telling you *how to hatch* the silk worm eggs, by *artificial means*, viz. by the heat and moisture of the human body. The common method there, is for peasant women to place them next their skin, and wear them at their labor in the field, till they hatch, and then to pour them upon the mulberry leaves to feed.

On the contrary, in America, every book that is published, begins with a chapter of directions how to prevent the eggs from hatching. Here, contrary to the practice in Europe, we are obliged to use our ice-houses and cellars to prevent the worms coming out before the foliage is ready.

With these facts before us, gentlemen, I maintain that, of all the *habitable globe*, *America* is best fitted for this, as one of her staple articles. It would delight me to put before you the information collected at the last Convention; and I have it in my power to state, that the Committee will lay before this Convention a large amount of information, collected from different parts of the country, on the subject on which they are called to deliberate.

With regard to the consumption of silk, I hold it to be the duty of the patriot and statesman, when any article is consumed extensively in the country, to use his influence to promote its production at home, so that we may be rendered independent of other nations; to do all we can to make our own people industrious, and to prevent them from looking abroad for food or clothing.

Much information with regard to silk is collected and might be laid before you; but I will ask your attention to one fact.

In the State of New-York we are slow in making progress in the culture of silk, compared with those parts of the country further west. We are great consumers of the article. There is a village called Gloversville, Montgomery county, N. Y., and it may surprise you, as I was surprised, to learn that $500,000 are annually spent for materials for making gloves; and listen to one fact; $10,000 a year is paid for silk to sew them with. Until lately all that silk was imported, and now I can tell you that the great body of it has been produced in this country.

Judge Meigs arose with a letter in his hand, and addressed the President as follows:

Mr. President—I never rose, sir, to say any thing with as much satisfaction as I now rise to address you. I see evidence that the public interest is awakening to the important objects of agriculture, when it receives substantial notice from a gentleman of such distinguished character and intelligence as the writer of this letter. It is from a gentleman of Dutch descent, with a fine old Dutch name, Myndert Van Schaick, a merchant of this city for many years. He authorises me to come here this morning and to offer to the American Institute one thousand dollars—that is, one hundred dollars a year for ten years—to be paid in premiums for the encouragement of the silk manufacture. He has well considered the subject and has taken this resolution.

New-York, *July* 16*th*, 1844.

To the Hon. James Tallmadge,
President of the American Institute:

Dear Sir—It gives me the greatest satisfaction to perceive from this afternoon's paper, that the American Institute is seriously engaged in efforts for the promotion of the culture and manufacture of silk in this country. Your distinguished society cannot be employed in a more truly national object, or in one which will confer on its members a greater share of renown; for I am persuaded that it is not an extravagant opinion to estimate the saving which the culture and manufacture of silk will produce in the country, when the supply shall equal the demand, at not less than twenty millions of dollars per annum.

I have always looked at this subject as one of the most interesting, in relation to the profitable application of industry and skill, which could be proposed for the advantage of the community. I therefore offer your society $100 a year for ten years, to be distributed in premiums, or to be awarded in one premium yearly, for the best piece of silk stuff, twenty-seven inches wide and sixty yards in length, manufactured in the United States, from native silk produced from worms of our own breeding. It may be alleged that the absolute certainty of our soil and climate are suitable for the production of the best kinds of silk, and that our own country furnishes a market adequate to the consumption of the fabrics that may be supplied for many years to come, at reasonable prices, furnish all the inducements which can be required to impel our wonderfully active and industrious people to undertake the culture and manufacture of this important article of trade. But the facilities for exhibition, and the premiums for skill, which your society propose to furnish, are necessary to enable exhibitors to compare their fabrics, and to stimulate them to the manufacture of the best description of goods. The opinions which were entertained by several gentlemen in this State, possessing great experience and ability, may be found in a report which I had the honor to make to the House of Assembly, on March 1, 1832, Document No. 176. It is therein stated that—"It has been ascertained by actual experience, both in France and England, that American silk, if not superior, is at least equal to the silk of any other country. The cocoons yield more than those of France and Italy, and their produce is of as fine a texture and equal in nerve to the silk of any other country, and when well reeled, it loses less than the Italian in wastage." The important and conclusive facts establishing the superior quality of American silk were communicated to me by the Hon. Ambrose Spencer, late Chief Justice of the Supreme Court of this State, whose investigations of the subject had been extensive and thorough, and were related with all the clearness and force which distinguish his mind.

It is also stated in the same Document, that "the treasury reports present the astonishing fact, that in some years the importation and consumption of silk fabrics in the United States, have been of greater value than the whole amount of bread stuffs exported; so the industry and labor of the farmers of the United States have been appropriated to the purchase and introduction of a luxury with which the country could, with the greatest facility, supply itself, and in a few years produce a staple which would not fail to become a source of wealth." The ability of this country to furnish itself with silks was confidently asserted by Le Ray De Chaumont, who, at the period referred to, was an agriculturist of high repute in Jefferson county, and perfectly conversant with the culture of silk in the United States. At the same time that the facts contained in those paragraphs encourage the culture of silk, from the consideration of the certainty of the crop or product, they also furnish an assurance of a suitable remuneration to all those families or culturists who are able to supply the demand at prices not higher than the foreign article is sold for in this market. But it should be inculcated on all who undertake this business that permanent success is only to be achieved by economy and industry, and not by the temporary stimulus of speculative movements, the futility of which has been ascertained by dear-bought experience. The extraordinary success with which this country has pursued the manufacture of cotton and woolen goods, leaves no room to doubt that an equal degree of attention applied to the culture and manufacture of silks, will be attended with similar results in the perfection of the fabric, and in its reputation as an article adapted as well to our foreign trade as for home consumption.

As to the manufacture of cotton and woolen goods, I am inclined to believe that there is good foundation for the opinion that this branch of industry may now be established on this island to advantage. It is a local subject, and perhaps does not come under the rules or general policy by which your society is governed, in their selection of objects for encouragement. But the city is not an insignificant place. Its interests may even be supposed to embrace a considerable portion of the national interests. And when you come to consider, as connected with the future history of New-York, the extent and importance of my suggestions, your society may feel inclined to look at the question which I shall now present for their investigation, and to aid in its development. During the last forty years, there has been a great destitution of employment for the laboring classes of this city in the winter months. In conversing on this subject, it has frequently occurred to me, that the creation of any new occupation which would afford a means of support, not subject to the intermissions of business seasons of the year, was an object so desirable as to be worthy of the attention of public institutions, as well as public spirited individuals. In canvassing the merits of different projects, having this end in view, none has appeared to be more favorable than the formation of manufacturing establishments. Since the introduction of the Croton river on the island, the probability that manufacturing of cotton and woolen goods may be conducted on terms so cheap as to insure a profit to capitalists, has been very much increased. The abundant supply of water which we possess, will, if properly husbanded, be applicable to a vast extension of manufacturing purposes, as well in cotton and woolen goods, as in the metals and other articles of merchandize. The reduced price of coal, and the facility of its delivery on either shore of the island, are circumstances which favor the opinion that the time has arrived when almost every description of manufactories may be prosecuted to advantage in this city.

It is also supposed that buildings can be erected on this island at as little cost as in any part of the eastern states; that machinery, at the present prices of fuel, can be run by the force of steam power, at not much greater expense than that of water power, if the interest on the capital invested in the purchase of the latter be computed; that labor, of the description employed in manufacturing establishments, will always be abundant in this city, and at a sufficiently low rate of wages; that this labor is for the most part without steady employment, and in this city never can find sufficient occupation, unless it be in factories; that small supplies of the raw material can always be procured in this market, thus saving the interest on the cost of keeping a larger stock on hand, or if it be desirable to purchase a cargo of cotton in a southern port, it may be landed near the factory without incurring the expense of transhipment, warehousing, or inland transportation ; that our extensive and affluent market, and the cheap and rapid communication therewith, which factories operating on this island must enjoy, would confer on them advantages, in making sales of their goods, superior to any in other parts of the country, and probably sufficient to counterbalance the presumed cheapness of water power over steam power ; and finally, that the use of fresh water in generating steam and cleansing boilers, is preferable to the use of salt water. There are probably some well informed and clear headed merchants and mechanics in your society, who possess the information and ability which may be required to elucidate the questions on which the practicability of the project must depend.

I have given you a short narrative of the opinions which have occurred to me in regard to it, not so much because I deem them to be indisputable, as for the purpose of exciting inquiry and remark.

If a thorough investigation of the proposition should result in a general conviction, that the business offers a profitable mode of investing capital on this island, and a useful mode of employing many idle hands, an important benefit will be gained for the city. The very low rate which the Croton Water Board, charges for the use of water in steam engines and factories, will operate as an encouragement to manufacturing pursuits of every description, in which water is an essential agent.

A large proportion of the scientific and laboring classes of London and Paris, derive their subsistence from the wages of manufacturing pursuits. I do not know that a list of the goods, wares and merchandize, made in these cities, can be furnished ; but their value has sometimes been reported in the newspapers in figures calculated to strike the attention of all with the greatest surprise at their vast amount, and at their vital importance in contributing to the subsistence and comfort of an immense population. Our own metropolis is as well situated as either London or Paris, for the manufacture of articles, in which they excel ; that is in silks, leather, gold, silver, iron, wood and many smaller commodities, constituting an immense aggregate of wealth, and exhibiting the most finished specimens of artistical skill and ingenuity. To these necessary, useful and ornamental products of mechanical science, in the production of which our city has been increasing every year, except during periods of political convulsion and financial prostration, may we not be able in time to add the important and extensive and lucrative business of manufacturing cotton and woolen goods ? The question is at least worthy of examination by competent hands. I wish you all health, and the society unbounded success.

M. VAN SCHAICK.

The following resolution was then offered by Col. Clark, and unanimously adopted :

Resolved, That the thanks of this convention be given to Mr. Van

Schaick, for his noble and liberal donation, and for his important remarks on American Manufactures.

The president then requested information concerning the treatment of worms, houses for feeding in, and all other particulars; remarking that open feeding, or feeding in free air, seemed to be gaining friends.

Mr. A. C. Van Epps being particularly requested, gave an account of his method, remarking as follows:

I have done but little in raising silk. The present season has been in fact the commencement. The two previous years were only an introduction. The last season has been rather discouraging. But I believe the causes are understood and may be avoided. I began feeding in May. Within the last two years, I have collected trees from individuals who had engaged in the speculation, and thrown the business in trees aside. I have in all about ten acres; only about four however, in condition to feed from; as they have been much neglected for the last three or four years. One acre should produce more good foliage than I collected this year from my entire lot. I raised about three hundred pounds of cocoons.

My first experiment was made in a very large building erected for a cocoonery at great expense, but entirely destitute of means for securing adequate ventilation.

I now feed in an open shed or tent. It is covered with boards, and the sides and ends are made of canvass attached, so as to roll up at pleasure. I feed in this from the commencement. During the first two weeks it is necessary to keep the canvass down most of the time; but after the third moulting, I keep them rolled up both night and day. It was sometimes exceedingly cold, but I think it productive of no serious injury. I believe this is now almost universally admitted by growers. I had this season two hatchings, ten days apart. The first fed through finely; but the second had just apparently begun to enjoy their food when I was obliged to proclaim to them "short allowances," owing to a failure in foliage. The result was, I collected what I could find within ten miles. My worms lived some eight or ten days beyond their appointed time, and left merely a token of respect.

A Member. What kind of fixtures do you use for the worms to wind in?

They wound in the branches from which they had eaten the foliage. I fed them in part in Gill's ventilating cradle, and the remainder on frames embracing all the advantages of the cradle as far as ventilation is concerned, and more convenient in use.

Would it not be a saving to give them other branches to wind in?

Some give them oak branches. They are exceedingly fond of these, but it does not seem necessary, where the mulberry trees are of any conisderable size, and properly used, as they answer every purpose. The trees start up again immediately. Mine were cut down the last of July, and when I left home, many of them were three feet high. In order to adopt this method the trees should be on rich soil, which I prefer decidedly.

Will the gentleman explain the plan of his frames?

I suspend my frames by means of upright pieces attached to the rafters, and coming down low enough for convenience in feeding. On these are nailed pieces of board about three inches wide, the whole length; also across the ends. My frames are about five feet wide, and my worms are placed on them immediately after their third moulting. For a few days I feed them on boards, which are placed on slats nailed on the bottom of the sides. Across the tops of these I lay other slats about one inch square, and at first six or eight inches apart, over the worms. I first lay the branches between these for a few feedings, and then across. The worms soon find their way on to these, and in about three days it will do to remove the boards on which they first fed. This leaves them fully exposed to a circulation of pure air from above and below, and on all sides. I place boards at the sides and ends, against which most of the cocoons are placed, as it affords a good place for them to retire from the light after their public work is completed. The branches usually become from one to two feet thick before the worms get through feeding; still, if care is taken in feeding, the foliage will be taken off so cleanly that the worms can be seen from below, through the entire thickness.

Did you ever observe any dampness on your worms?

No. The dampness so commonly complained of arises from the fact that more foliage is given the worms than they consume; this heats and collects moisture, and frequently proves the destruction of entire crops.

President. Under the old system the worms were fed on boards, which kept every thing together and caused fermentation, dampness and disease, with an offensive smell. *This* arrangement prevents that difficulty, and must give a circulation and dryness, while every thing loose falls to the ground, and can easily be swept away.

A Member. Your eggs?

Mr. Van Epps. I preserve them in tin canisters, taking care to separate the different sheets by putting cotton batting between them; this absorbs the moisture. I place this canister in a box of dry sand, so that it may be at least four inches thick on all sides. This box is placed in my ice-house, and surrounded by ice. It is necessary to attend to this before the weather becomes warm enough to cause the hatching process to commence. I should advise that they be put in as early as the month of February. I think eggs might be kept in this way for centuries. I have not known mine to hatch in less than two weeks after exposing them.

President. Some years ago, being requested by an invalid of my family, that she might have something to employ her attention in her illness, I procured a thousand or two silk worm's eggs. As we were about to remove into the city in the autumn, some were put into a lady's bureau; another portion were fastened to the beams in the cellar out of the way of the rats, and the rest were placed in the ice-house. In May, those in the bureau were found hatched and dead. The others remained unaltered. When the leaves came out they were put into the chambers, where they hatched in a few days. I afterwards visited Italy with my daughter; and as she spoke the Italian language, I got her to inquire how the people managed to keep their silk worm's eggs from hatching. They could not understand her question, as they never have it to do.

In Naples they keep their eggs in bottles, which you will see for sale in all the little groceries and shops, as we should call them. The fact is, they never hatch without artificial heat; and this I afterwards learned from books. The discovery was surprising to me, and convinced me that our climate must be better adapted to the silk worm, and of course to the silk culture, than Europe. I began to make known these facts on my return; and this is the beginning of our particular acquaintance with the fact

In Europe, they are never hatched, unless by the heat of the human body, or that of manure. They are first scraped off the papers, to which they naturally adhere, and that destroys one-half. I will request Mr. Barbour to make some experiments on sealing tight, and report at our next convention.

Mr. Barbour. I will endeavor to do so. Eggs must be from a healthy stock, and in a healthy state. If the incipient process of hatching commences before they are brought out, where they will proceed without interruption, you cannot be certain that they will be healthy. If they hatch in less than ten or twelve days after being exposed to the warmth of the atmosphere, you may be sure the hatching began before the exposure. There has been many a case of disappointment arising from this source.

They appear, at first, well; at the first moulting you lose some; at the second, some more, and then perhaps an epidemic breaks out, and sweeps off all. Moulting is a crisis in the constitution of the worm, and *then disease* shows itself. It is reasonable to presume that when hatching begins in the ice-house, evil consequences will follow.

Imbed the eggs in the ice. Few ice-houses are cold enough above the ice, to secure them in warm weather. My experience accords with Mr. Van Epps's. I have a tin trunk, and imbed it in the ice. Perhaps cotton or sand may not be necessary. Surround the box with ice. Make a hole, line it with straw, and put the box into it. You may keep them till midsummer, and I believe for ten years. The transition should not be sudden when you bring them out. Put them in a cellar for a day or two, and then bring them into the air, and they commence hatching sometimes at 40° or 45°. Let us follow nature. The worm lives on a tree like all caterpillars. The very same warm weather that brings out the leaf, hatches the little worm to eat it.

A Member. Are early worms most healthy?

Yes, because most natural. A year ago, however, I had as good success in September as in June; and that was the only case in which I have had good success in late feeding. But the case was peculiar. There was a drouth early in the season, and in August the leaves came out fresh, while September was dry and favorable; so that the season was a good one for late feeding. The cold cannot be too great for eggs. My experience is in favor of as early feeding as possible.

A Member. Have dried leaves been tried?

Yes, by Dr. Stebbins, of Northampton. They must be moistened. Eggs are sometimes not put into the ice-house until in April. They should be in mid-winter, to guard against early warmth.

Mr. Barbour remarked that Mr. Van Epps's method secured ventilation. An under current of air passes below the worms and up through the frames, promoting dryness and health. Mr. Van Epps keeps his curtains up most of the time. I was glad to hear it. Nine-tenths of the disasters proceed from impeded circulation. I have no doubt children in school, are often seriously injured by the want of pure air, and even many who are shut up too much at home.

Last year I stretched cotton drilling over a ridge poll, with rollers fastened to the ends, on which I rolled up the sides in good weather. This year I roofed with boards, and cut up the drilling for curtains.

A Member. Rain?

Not hurt a whit. I believe it does harm only by its indirect effects, by wetting the litter and causing it to ferment. I do not think rain or dew injure worms at all. In the native state they must take rain, dew and wind just as they come.

I, and probably others, have found worms thrown out with litter, living and thriving, brought in healthy, and passed through. My sons have done it with success. You may ask, why shelter them? To keep off sun. It is not certain that a leafy grove is not the best place we could have. It has not been tried.

When open feeding was first proposed there were as many objections to it, as there are to no shelters, but now almost every body is in favor of it. At Economy, close feeding is successful, but there an amount of labor is bestowed which I am confident cannot be generally given by the mass of feeders. They have also a peculiarly favorable situation; a constant current of air blowing up or down the river, which draws through the building. We have occasionally two or three days of still moist weather; and in common situations, the chances of getting a lot of silkworms through, are as forty nine to fifty. This year I have pursued a different course from any I had before tried, combining the old and the new plans. While young I kept the worms in a close room, for they so easily become chilled while young, that they will not grow so well when exposed to the weather.

When older I threw open my tent night and day. I used to think there was great danger of cold when winding; my fear was partly removed by Mr. Wadsworth's letter last year, in reply to one addressed to him. He said cold did not stop them.

This year I was late; the middle of July they hatched, and wound from the middle to the last of August. We then encountered extreme changes; in the morning the thermometer would be at 50° to 75° and 80° and then 45°. All were still, the whole lot, as still as if dead. But the sun came up warm, and about ten o'clock they were all atwork again. I never could see any injury; there was no loss but in time; that is of no consequence, provided they go through healthy and make good cocoons.

AFTERNOON SESSION.

The convention was called to order at four o'clock, by the president. Mr. Barbour then read a number of letters from silk culturists and manufacturers, from different parts of the country, amongst them the proceedings of the New-England Silk Convention. Conversation and familiar verbal communications were then resumed.

Mr. Barbour. I met Mr. Gideon B. Smith, in Baltimore a few days since, and he told me that it ought to be proclaimed north and south, that mulberry trees should always be planted on hills, and in no case in valleys; I am strongly inclined to believe him.

Mr. Swan. I wish to correct a mistake which prevails. What is called American sewing silk is not all raised in this country. There are not half enough cocoons to support the manufacturers, who are obliged to buy imported raw silk, to spin into sewing silk, not including a great quantity used for tassels &c., which comes from Bengal, China, Turkey and Italy. The demand for cocoons is indefinite. If ten times as many cocoons were raised in America, the demand would still be high.

Mr. ——. A gentleman whose name, for reasons of propriety, I am not about to give, a resident and manufacturer at Glasgow, has within three years, commenced a large silk plantation near John Randolph's estate, on the Roanoke river. In a few years he expects to send above one hundred hogsheads of cocoons to his manufactory.

Mr. Barbour. There is no possibility of glutting our market with cocoons. They are a bad article to transport. Local filatures are needed; but then the market will be for many years indefinite. One of the letters which have been read, stated that in one establishment they have this year purchased only $1,000 worth of American silk, and foreign to the amount of $20,000. Three times as much silk is manufactured now as three years ago; yet in the East, most of it is foreign. But west of Philadelphia, they do not use a single pound of imported raw silk. These facts teach us, that we need entertain no fears of glutting the market. We must labor several years before we can supply existing establishments, and there are constantly new ones coming up. I have got fifty cents per pound for every pound of reeled silk I have ever sold, above what is paid for foreign.

President. These two questions have been handed in to me, with a request that answers may be given.

1st. What is the duty on raw silk?

2d. What should it be?

Several Members. Two dollars.

A Member. If duty were laid in some proper proportion on manufactured silk, it would help cocoons. At the last convention it was proposed to acquaint the Secretary of State with an imposition practiced by importing *manufactured silk with the gum in it*, as *raw silk*, at fifty cents a pound, when it ought to have been two dollars and fifty cents.

President. In compliance with that direction, I went to the custom house, as President of the Convention, and studied the subject, acquainting myself with the laws and the practice. I then addressed a letter to the Secretary of the Treasury, pointing out the frauds, and stated that no more laws were necessary to correct them, but only a better administration of the existing laws. "Silk in the gum," as I informed him, implies silk unmanufactured, with the natural gum of the silk worm still upon it. But silk spun and dipped in some coarse kind of gum, merely to evade the law, ought to be seized for fraud. My letter on this subject was published and copied into many of the papers. I have further to add, only, that the Secretary thought proper never to answer my letter, while our custom house officers here acknowledged it was a glaring fraud.

Mr. Barbour resumed the reading of letters, beginning with one from Mr. Swinney.

By request, Mr. Swinney made some additional statements respecting his method. He said that he had continued to feed in shanties after the third moulting, and prefers it. Feeds on branches, because it saves much work in collecting foliage; and shanties save also much expense usually incurred in the erection of cocooneries. His worms are the sulphur.

Mr. Barbour read other letters; when, on motion, it was

Resolved, That the letters be referred to the Business Committee, with discretionary power to insert them in the report.

The President having invited the members to attend the Fair of the Institute, the Convention adjourned till to-morrow morning at 10 o'clock.

EVENING.

The assemblage at Niblo's, in the evening, was immense. So great was the throng, that thousands were unable to hear a word of the address, which was delivered by Rev. I. R. BARBOUR, of Oxford, Mass., and is reported by the Tribune as follows. His remarks were both retrospective and prospective. He said that the feasibility of the growth and manufacture of silk in this country, had been amply demonstrated. Our soil was adapted to the growth of the mulberry, and our climate to the healthy condition of the silk worm; and it has been shown by actual experiment, that while the loss of worms in the silk growing countries of Europe, was from 20 to 25 per cent, here it need not be more than 5 per cent. Our silk too, was, or might be, of a better quality than that produced in other countries. Mr. B. stated, as an illustration of the rapidity with which silk may be manufactured, that in June last, a mulberry tree stood on the banks of the Ohio, the seeds of which, being planted, produced other trees; and the leaves of those trees were used in feeding worms, and articles manufactured from the silk thus produced, were on exhibition at the Fair! He would challenge any silk growing country to beat this.

The extensive difficulties which surrounded this enterprise, had been surmounted. Every one who remembered the Mulberry bubble, of 1836, knew what those difficulties were. Since that period, the friends of the cause had been silently at work, settling elementary principles, and it would yet be seen that the cause did not follow the bad fortunes of the speculators in morus multicaulis. Intrinsic difficulties had been overcome, and it was proved conclusively, that silk-worms might be raised with as much certainty as chickens. Those who had embarked in the cause, having been for a time deluded by false ideas, were under the necessity of unlearning many things that had been taught them, and this also, they had successfully accomplished. The great object before them, was to extend the growth of silk throughout the United States. There was not a State where it might not be profitably produced. It had already been grown as far north as Maine. Prejudice would burn itself out in its own fires. The object was not to snpersede other branches of industry, but to incorporate this among them; thus saving to the country $20,000,000 annually—enough to keep the balance of trade in our favor. We could make our own silk, as easily as we could raise our own corn and potatoes; and there was no more reason why we should send abroad for the one than for the others. Mr. B. was for home industry, (cheers,) and this, in no spirit of selfishness, but in the exercise of feelings which were an ordinance of God.

Mr. Barbour concluded by expressing his thanks to the American Institute, for the interest it had manifested in the cause, under every discouragement. Public prejudice was at length subsiding; he did not believe any body had *cracked a joke* over the mulberry speculation within the last eighteen months. He would ask the Institute still to foster this great interest, and he trusted that many friends would be induced to imitate the example of Myndert Van Schaick, who had that day made a donation of $1,000 to advance the cause.

SECOND DAY—Oct. 10.

The Convention met at 10½ o'clock, A. M. The President in the chair.

Verbal communications being in order, Mr. Barbour described Mr. Paine's method of rearing silk worms. The building is two stories, and the ends have been opened, so that half of each end can be opened so as to admit the atmosphere freely. He has got, this year, about 50 bushels of cocoons, making about 150 lbs. of reeled silk.

There was a time, one Saturday, that the weather was such as to render the worms torpid to such an extent that they were not fed. I was there on Monday, when it was warm, and they were feeding, as usual, in perfect health. They went on and spun well. This shows one of the advantages of open feeding. Give your worms the pure air of heaven.

A Member. How was the roof covered? With shingles.

Another Member. What kind of mulberry? The Alpine.

AFTERNOON SESSION.

Mr. Pierce. It is as easy to keep eggs as any thing else; roll them up and put them in a tin canister; keep them in a cellar until near spring; then lay on ice and cover with straw, and they will keep as long as the ice, and will not hatch under fifteen days after being exposed.

Mr. Barbour. Did you ever expose them to warmth in winter?

Mr. P. I will tell you what a widow woman did near me. She picked up some silk worms thrown away, which she took home; they wound well—came out, and laid their eggs. Being ignorant of the management of them, she put them in her clock, where they remained all winter, a fire being kept up every day. They hatched out early in the spring, too early for the mulberry; she gave them currant and lettuce leaves, and afterwards the mulberry; they fed seven or eight weeks, and wound well.

President. I remarked yesterday that we once hatched eggs in abundance. Now our experiment in the cellar was to avoid frost, supposing it might destroy worm's eggs as well as hen's.

Mr. Pierce. I use Gill's cradle, and think much of it. I leave out the bottom of the trough; think it a great improvement; some of the worms at first fall through, but can be picked up without injury; I did not use a pail full of water this season, and succeeded pretty well—better than last year.

Mr. Church. Did you ever rock them? And what per cent did you lose?

Mr. Pierce. Probably not five per cent, and only by accident—stepped on, &c. I have not found any benefit from rocking.

Mr. Barbour. So far as I know there has not been a single failure this season in the new school. We have old school and new, in silk, as in politics, theology, philosophy, and every thing else. The *new* school give the pure air of heaven. No failures—some mishaps. Mr. J. Bolton made 800 pounds good fair quality of cocoons. I spent a night with him eight weeks ago. About six persons, within six or eight miles of me, have made three, four, seven and eight bushels. I sold eggs to a lady, who raised eight bushels of beautiful cocoons; she spoiled them by home reeling. A few weeks since I went to Virginia, and I visited Loudon, Prince William and Fairfax counties. It is well known that a tide of emigration has been flowing from the river counties of this State. For ten or fifteen years, German families from Pennsylvania have gone into Loudon county, and taken up farms. They have resuscitated those worn out lands; shallow tillage had led to their abandonment. Now, after deep plowing, with a good crop of clover turned in, they yield well. I found Gen. Van Ness, of Washington, preparing twenty acres of trees (mulberry) five miles from Washington, where he intends reeling. Mr. M——, of Alexandria, has raised forty or fifty bushels of cocoons this year; good quality. I met several persons from different parts of Virginia, and west, who raise silk. Before I left home I had a letter from Mr. Gardener, of Lexington, Ky. Cocoons are produced there, but they have no market, and choose to sell cocoons and not reel them. They think they can grow a bushel of cocoons as easily as a bushel of corn, in open feeding, and think the labor and expense is thus reduced at least one half. All that is necessary is accurate and reliable information.

President. I will make a single remark with diffidence, not knowing that it is correct. The morus multicaulis, in low, warm land, is altogether a different thing from what it is in high situations. The leaves are large on the one, and small on the other. Another remark: If we let another tree, of similar character, grow as fast as the multicaulis will, in a favorable situation, it will be winter killed. This is the cause of the winter killing of trees. Now the theory is, that the sap is thawed and put in motion by late warm weather; and the cold weather bursts the finer vessels of the circulation. Take an example.

The catalpa is much like the multicaulis in the size of its leaves, and the rapidity of its growth ; both have pith in the centre, and throw out branches seven or eight feet long in one season. I planted a row of catalpas on a hill over the river, and others behind the hill and the house, in a warm sheltered spot, in a valley. The former grows a foot, or a foot and a half, and is never killed in the winter. They were cut down to the ground once in two or three years. We therefore frequently condemn a tree, without understanding the different chances of vegetation given it.

Again : Mr. Rappallo thinks the morus multicaulis may do for worms up to the second moulting, and not after. The white mulberry is a hard tree ; the black second only to the locust, and if you try to cut it, beware of your axe when you strike it. These remarks are thrown out to harmonize the strong views I hear from gentlemen.

Mr. Ward. I was brought into the mulberry speculation in 1841, and fed a few worms. In 1841 I was elected to the Legislature. I thought of the many trees grown, and read and consulted on the subject. I am indebted to you, sir, Mr. President, and Mr. Rappallo, for information. I came to the following conclusion, viz : that our soil is good, and our climate the best in the world, so that we can raise and manufacture silk under every advantage. I have not seen any reason since to change my opinion. It can be done in every State with different degrees of success. I was astonished to find such ignorance in members ; I talked much, and got the silk bill passed. There is still much ignorance ; it is want of information ; I think it should be attached to the business of every farm ; if a man has but one cow he cannot expect a large dairy ; if he goes into it on a small scale, he must be contented with a small profit.

Mr. Barlow reported a plan of their report, and the same was recommitted to the committee for completion.

Mr. Barbour remarked on the manner of publishing the report. Last year three thousand copies were published, and had a limited circulation, was badly printed and contained some errors.

This is the commencement of a series of annual reports, and friends wished it stereotyped to keep on hand. He raised $200 at Boston last year, by individual exertion, and then corrected and had the report stereotyped, and published in a neat, convenient form. He hoped this would be done this year, and with as little delay as possible, and measures taken to give it an extensive circulation.

After some further deliberations, it was referred to the committee for publication.

Mr. J. P. Van Epps. I planted five thousand trees on a side hill in a three acre lot ; they were the Multicaulus. These we put in the ground about the middle of May ; and I had the pleasure of seeing about eight thousand cocoons made from the foliage. This is one of a thousand of them, (presenting a fine cocoon) fed through the first age on lettuce. On the twenty-seventh of July, I began to feed from the trees. Some of my worms were hatched on the road, and were not fed at all for two or three days. Two hundred of the cocoons weighed a pound. After their third moult, on the second day, a number of them turned a rich amber color. They were set aside, and made good cocoons, two weeks before their regular time. I selected a few dozens of them, which came out and laid their eggs. We have thus gone through the whole process this season; planting the trees, hatching, feeding, winding and laying the eggs. Many have called to see us, some coming 20 miles. The remark was sometimes made, that nothing could be made out of it, that it would cost as much as they were worth to get them to market, &c. About a dozen farmers have decided to go into the business themselves. They became convinced that more could be made from a few acres devoted to this business, than many would produce in the ordinary branches of their farming.

Let not the idea be held out that it is unprofitable, even on a small scale. That is, that a reasonable return will not be realized in proportion to the capital invested. I believe the hills of Otsego exactly fitted for it. There is no finer air or sky in the world.

President. We have a native of Genoa among us, a native of Italy, long a respected resident of this city. He is connected with an association formed for carrying on the culture and manufacture of silk, with a farm on Long Island, where they propose to import artizans from Italy, well skilled in the art, as it is practiced in his native land. Mr. Rappallo, will you oblige the convention, by giving some information concerning your plan and operations, and the subject generally?

Mr. Rappallo. Yes, gentlemen; we have a farm of 53 acres, and 50,000 mulberry trees, 18 miles from this city.

We could have cultivated the Multicaulus, but have the Morettis which will stand the climate. We do not want Italians for them, as we know how to cultivate them properly. They will merely require to be kept free from weeds. We have a Frenchman who does that; we have 53 acres of Morettis, which will not only stand the climate, but yield 33 per cent more foliage than other kinds of white or Italian mulberry, or any other; and better quality, that is to say, when worms are fed with them, they give a quality of silk far superior to any other mulberry.

There is another thing which I wish every man to pay attention to. I have heard from different parts of this country, that after they had large crops of worms they all died. It is true, they may have died for want of ventilation; I suspect they may have died from not having better food than the multicaulis. This is what I have been told by French manufacturers. They tell me the Moretti is far better for the worm and silk. Now we have trees which are four years old; they have been four years in this country; and they will be fit to do something next summer.

In 1831, I wrote Mr. Ambrose Spencer, and proposed to import a person from Italy, and go to the farmers' houses, and raise the worms as they do in Italy, and also to reel the silk. Mr. Spencer, then chairman of the Committee on Silk, was very desirous to have it done. I now recommend that they be imported, as they know the process practically. We should not experiment about this thing. I wish you might see the process by an experienced hand, and improve it if possible. Persons choosing, may apply to me; I will give information. If any will join us on our farm, we will be happy; if not, we go on alone.

Mr. Barbour. Have you seen the large leaf Canton and Broosa mulberry?

Mr. Rappallo. It is not the same. The Moretti was discovered by a professor of Pavia, whose name it took. It is a scientific business in Italy. They pay great attention to it, though here they think anything will do; inventing every day—all our experience of five or six hundred years is nothing.

Mr. Barbour. It has been doubted whether the business can be made profitable on a small scale; but let a man watch one brood of chickens from hatching till they go to market, and the profit won't be much; yet chickens can be raised in a small way profitably. A man and his boys may have silk-worms, the boys and the silk-worms may be neglected, sometimes fed and sometimes not. You may ask that man, and he will say he has not gained anything. The truth is, in the northern States, the aggregate of farming is made up of combined results—many little things. The farmer has his hay, his corn, his dairy, and his vegetables. You will not find the whole amount of either of them more than $50 or $100. Take Massachusetts, where I belong, you will not find one with $100 on any one article to send to market, on an average: but his profits come out just in this way. He has a surplus of some five or six different articles; perhaps 100 bushels of potatoes, 100 bushels of corn, some butter, some cheese, apples, &c., and altogether realizes a pretty little sum.

Mr. Leavenworth. I suggest that the committee be instructed to petition the Legislature to give a bounty for ten years. In New-Jersey it was repealed the first year. There is now a large mulberry plantation near Red Bank, in that State, of 1,500 acres.

THIRD DAY, October 11th.

The convention was called to order by the President.

Mr. Barlow, chairman of the Committee on Resolutions and Address, then submitted their report. The address and resolutions were read by sections, and adopted as follows:

Resolved, That, as it may be clearly inferred from the constitution and habits of the silk-worm, that it is designed by the Supreme Being to be subservient to man, so it may be concluded from the singular adaptation of the soil and climate of the United States to the healthful growth of the worm, and the most valuable varieties of the mulberry, that He has designed this to become a great silk producing country—and that these facts indicate to the people of these States a wide field of enterprise and industry, and to their governments a judicious policy of encouragement and protection.

Resolved, That the production and manufacture of silk in these States is regarded by this convention as a matter of great national importance, as an essential step towards our independence of foreign countries for an article of universal necessity—as a branch of domestic industry annually calculated to give employment and subsistence to great numbers of our population, and to become, in its full development, a source of vast national wealth. It would give to females and children, to the aged and the poor, the opportunity of earning for themselves, and saving for their country the twenty, fifty, and an hundred millions of dollars which must otherwise be annually drawn from it.

Resolved, That the granting of State bounties for the encouragement of the silk culture, is a matter of simple *justice* to those who in its incipient stages embark their labor and capital in a great national enterprise, whose benefits will be shared by all, and descend in an increasing stream upon a countless posterity—and of obvious necessity, as that without which the enterprise must struggle with continued difficulties, and its success be indefinitely postponed. All classes of citizens are interested in the success, and the pioneers in it are entitled to the benefits of their co-operation. The nation will reap the harvest, and should not grudge to the plowman and tiller of the seed that shall yield to its sickle an hundred fold measure.

Resolved, That the friends of the enterprise in the several States of the Union be respectfully recommended to prepare and present memorials to their respective Legislatures, praying that such encouragement, in the form of bounties or otherwise, may be granted to silk growers, as in their wisdom they may judge expedient; and that experience testifies that such encouragement should be continued at least ten years.

Resolved, That this convention respectfully commend this subject to the enlightened consideration of the executive officers of the several States, earnestly requesting that it may be presented to their respective Legislatures, as a subject of such immediate and liberal legislation as may correspond with the present exigencies and future welfare of the people and country.

Resolved, That a copy of the above resolutions, together with the reports of the proceedings of this convention, be sent to the executive and legislative officers of the General Government, the Governors and Secretaries of the several States, with copies for distribution among the members of the several State Legislatures.

ADDRESS OF THE BUSINESS COMMITTEE.

In giving expression to the views of this convention, instead of expressing them in a set of resolutions, as is customary, your committee have deemed it advisable to embody them in a brief

Address to the People of the United States.

At the call, and under the patronage of the American Institute, we have met as the friends and advocates of a great national enterprise—an enterprise destined at no distant day to become one of the most powerful tributaries to national independence, and auxiliary to the happiness and industry of our people. A national convention of practical silk culturists and manufacturers, from different and remote parts of the country, met in this place one year ago. The proceedings at that time were of a most important and interesting character. The information collected and embodied in their published proceedings has told most happily on the cause we seek to advance. The superiority of our soil and climate for rearing the worm and cultivating the mulberry, and the adaptation of American skill to the manufacture of the finest fabrics, were then the subjects of consideration. That the views then entertained on these points were correct, and that silk may be produced to advantage, either on an extensive or a limited scale, the experience of another year has been making constant and valuable additions to the evidence then in our possession.

The system of *open feeding*, there reported upon, mostly as an experiment, has this year been adopted by hundreds, and not a single failure has been reported to this convention. From the frosty regions of Maine to the sunny plantations of Georgia, but one voice reaches us,—that of universal confidence, and universal success,—by all who have fed on what may appropriately be termed the New School System. It should here be remarked, however, that in pronouncing all parts of our country adapted to the production of silk, they are not *equally* so. A distinction should be made between the northern, middle, and southern portions.

At the north, the feeding season is short, in consequence of untimely frosts,—seldom commencing before the first and the middle of June, and rarely continuing later than the first of September, with frequent interruptions by cold and chilly nights and mornings.

In the middle sections, (embracing some parts of New-York, and the entire valley of the Ohio, and the adjacent country,) the feeding may be commenced much *earlier* and continued much later, with corresponding profit: but the southern portions of the Union exceed any other parts of the known world, for the successful prosecution of this work, and may be made to yield a better return than *cotton, tobacco*, or any other crop.

These conclusions are mainly based upon the communications of growers in these several sections. All have not met with equal success,—as some still continue their attachment to the Old School System, notwithstanding all the evidence against its practicability. We have proof, however, that they are becoming convinced of their errors, by their want of success; but even in *close feeding*, some are successful; in fact, some of our *most* successful feeders, feed in this way; but the labor and expense are, in all cases, materially increased.

Plantations have, this year, been much enlarged, and many new cases are reported. The number and variety of manufactured silks now exhibiting at the Fair, indicate a corresponding increase and improvement in this department of the business; so much so, that, although many thousand pounds of raw material have been produced in this country, our manufacturers are obliged to import, in large amounts, *inferior foreign* material, in order to keep their machinery in operation.

In view of the foregoing conclusions, and the facts upon which they are founded, we would say—

To individuals now engaged in the Silk Culture: Press forward,—extend your operations as rapidly as possible,—and use every exertion in your power to induce others to follow your example.

To Legislatures, State and County Agricultural Societies: Offer liberal bounties and premiums, for the encouragement of the production of cocoons and reeled silk.

To CAPITALISTS *convinced of the feasibility and importance of our undertaking:* Invest some of your means to render productive the *experience* and *skill*, now possessed by many whose *pecuniary resources* are so limited as to prevent their employing them to advantage.

We would not fail here to call attention to the all-worthy example of the Hon. Myndert Van Schaick, who has so nobly led the way, by contributing $1,000, to be used by the American Institute for the encouragement of the manufacture of silk.

Instead of adding further to our remarks, we have appended a valuable communication from Dr. Daniel Stebbins, of Northampton, which, by some mistake, was not included in the report of last year. All of which is respectfully submitted.

A. C. VAN EPPS,
I. R. BARBOUR,
I. G. WARD,
I. S. PIERCE,
L. CARY,
J. W. CHAPPELL, *Committee.*

To the Trustees of the American Institute:

GENTLEMEN—It might be amusing to speculate upon the early development, rise and progress of silk culture, which succeeded the fig leaf and sheep skin clothing of early times; but we have better evidence than the most fanciful imagination can devise.

The most ancient history of the world, has frequent notice of silk and the silk tree; and the most eminent linguists suggest that the Hebrew words, "*shesh*" and "*mishi*," might be rendered either, cotton, fine linen, or silk. Whether the Jews, at their dispersion, or any other time, carried with them the knowledge of silk culture, or whether it originated with the Chinese, and by stealthy measures was introduced into Europe, is not needful for us to contend about. Desirable as it might be to review the past, it would be more pleasing could we lift the curtain and ken what changes will take place within the present century. Great and important changes have taken place within a few years. Most of us remember the disastrous tree speculations, succeeded by almost a total apathy in the silk cause, until recently, when public sentiment is waking up, to establish the silk cause on a firm basis. Within the last year, great and essential improvements have been devised and put in operation by intelligent silk growers, more, it is hoped, for the general good than private emolument.

Among the early pioneers of our country, in the silk culture, we hold in grateful recollection the names of a Styles, Aspinwall, Clark, and a few others, who early engaged in the introduction of silk culture into the northern and eastern States, periling their time and property in the great and good cause in which they were engaged.

The Rev. Dr. Wigglesworth, of Cambridge, is recorded to have raised the first silk worms in New-England, in 1737. How, and where he obtained the eggs, is not told us. Between the years 1747–50, the Hon. Jonathan Law, Governor of Connecticut, wore the first silk cravat, and his daughter the first silk gown made of American silk of their own raising. In subsequent years, the culture of silk was attended with good success and profit, until suspended by the operation of the war of the Revolution, during which, and several years after, very little was done in New-England, except in Mansfield and its vicinity. There was then in existence no general understanding or union about the culture of silk: no patronage of a public institution like that of the American Institute of the present day. The trees then used were of the white mulberry, but within the last ten or fifteen years, other varieties have been introduced, having a larger leaf and equally adapted to the nourishment of the worm. Since the introduction of these varieties, there has been a gradual advance in the propagation of trees and growing silk, until, and in consequence of the disaster of the tree speculation; after which, a wanton destruction of the mulberry extended to every part of the country where they had been introduced. Now this state of things must be counteracted, and before the country can take the stand in silk culture which would be desirable, or even needful, to establish it on a footing which it merits; and would we brighten the chain of union connected with the prosperity and independence of the United States, there must be a rapid reproduction of the mulberry tree. And as there is a great variety, each of which had been extolled by the speculators, even before the respective qualities had been tested, it is of importance to select such a variety, as under all circumstances, is most deserving—producing the most nutritious foliage, retaining its verdure in the greatest perfection through the season of feeding, even to the close of the year—for which the worms have a decided preference, producing a rapid growth of the worm, and an enlarged cocoon, and affording more silk: especially if we are to approximate the mark which has been set up by a gentleman of high consideration, who has been neither interested in the raising, buying, or selling trees, but being an ardent friend to the cause, is of the opinion that we can and must raise fifty millions worth of silk per annum, in ten years. As an encouragement to effect that desirable amount, we have the appropriate soil and climate; our habits of industry and mechanical tact are a sufficient guarantee that we can do much, that we can compete with the cheap labor of any country whatever; but to carry out this position, the united aid and patronage of both sexes should be put in requisition. The influence of woman has been powerful in church and State; the time was, when the spinning wheel was an accompaniment for the social circle. Are there not some now living, who, in by gone days, have assisted the ladies in transporting the wheel from house to house, on the social occasions? Indeed, I know of one. But since the introduction of machinery to take the place of hand labor, the spinning of wool, cotton and flax, in a domestic way, has become quite unfashionable, even in the most retired districts of the country.

It would be a Herculean task to introduce the manufacture of wool, cotton or flax, into the families even of the wilderness, without meeting at the very threshold the objection, "that it would cost ten times more to manufacture the article in our houses, than it could be purchased for at the stores." Here the good man of the house is brought to a dead stand with his wife and daughter, who do not take into consideration that one pound of silk may be worth one hundred pounds of flax; while the difference in the cost of production is such as to be greatly in favor of the silk crop—almost equal to the difference between one cent and one dollar. The labor required is light and pleasant, and much more profitable than the usual crops; this is confirmed by the returns made to the New-England silk convention. Taking into view the whole circumstance and condition of the country, does not the culture of silk merit the attention of the public, not only as a source of private emolument, but of great public utility, to raise and manufacture our own silk, as well as wool and cotton? That the culture of silk has been remunerating and profitable, is evident from the great length of time it has been cultivated, and we are not entirely destitute of encouraging evidences at home. As well attested facts are desirable, I venture to mention the following among the testimonials of recent occurrence.

A gentleman of undoubted veracity and high standing, wrote me, in substance, that he had a lot of mulberries, two years old, set upon two acres of land; that the land would not ordinarily yield over 40 bushels of corn to the acre; that he had kept an accurate registry of expenses: that after feeding the worms and reeling the silk, he had a nett profit of two hundred dollars: that each tree had yielded him an income equal to that of thirty cents placed at annual interest.

This result evidently shows, that there is an intrinsic value in the mulberry tree for growing silk, without taking into consideration the probable value of the after foliage or bark of the trees for important uses, which it is hoped another year's experiments may demonstrate.

Some mulberry trees, when the roots have attained five or six years, yield abundance of good seed. Several pounds have been saved for future use, and some fine plants, from seed sown last spring, have been raised, which develop a leaf like the original. That there is a difference in the quality of foliage for producing silk, results from two experiments, which came under my observation, will prove: one of which was purposely made by Mr. Theodore Bartlett, of Northampton, to ascertain the difference of quality, if any. The worms fed, were of the same kind and hatching,—all fed with equal attention; one parcel was fed exclusively upon the foliage of one variety of mulberry, and the worms were of larger size, and the cocoons adjudged to be one-third larger or heavier than the cocoons made by worms fed exclusively on the foliage of another variety. The other experiment was the result, without design, merely to gratify the request of the feeders; because, as they said, they found that the worms were evidently more fond of one kind than the others. In this experiment, also, the worms were much larger than usual,—so much so, that the visitors said that it ought to be made public. The difference of size was so evident, that, in another crop, I began to feed a parcel of one and the same hatching, *each* upon a *separate* variety of mulberry. The season of the year was so late, and the experiment has not been resumed, having sufficient evidence by the cocoons already made, that there was a manifest difference. The examination was made by a large and respectable number of gentlemen, and the clerk of the county was selected to make the test; who, after trying several experiments with the scales, found that five of the cocoons of the worms fed upon one variety of the mulberry, would balance eight cocoons made by worms fed upon the other varieties of mulberries; which is five to eight in favor of the mulberry used in both experiments. There has been some diversity of opinion whether a large number of worms could be fed as profitably, as in small parcels. A fact occurred last year in favor of a limited number, when the eggs of five millers produced worms to make two thousand four hundred cocoons,—which yielded one pound of very superior silk. Those who fed larger and crowded parcels, did not succeed so well in cocoons or health of the worms. Something may be attributed to careless feeding, or neglecting to feed them when it was necessary. The size and firmness depends very much upon attention and constant feeding, whenever they will eat. Such is the result of this year's experience; having had worms of the same variety and hatching, fed at two different places, and upon the same kind of foliage. One parcel were fed attentively, from early dawn of day to the shades of evening, by persons who were paid by the pound for all the cocoons raised, and thus interested; and the cocoons produced were about *one-third* larger and heavier than the parcel fed by a person on *monthly wages*; and in a cocoonery, too, constructed for open feeding, in the midst of a vigorous growth of the best variety of mulberries, where fresh foliage could be gathered with the greatest facility every hour in the day. But those who fed and were paid by the pound, were often necessitated to feed with wilted leaves, or branches collected from a distance at mid-day, for next morning's use; these were sometimes sprinkled with water, to preserve the freshness; and especially those collected to be used on the Sabbath. I have never known wet leaves injure the health of the worms; leaves gathered while moist with the dew, have been kept good two or three days, fresh as when gathered. An experienced silk grower has told me, that when he was a boy, it was considered highly necessary to sprinkle the leaves with salt water; and have myself noticed that foliage so sprinkled has been preserved longer, and the worms appeared to like it. A few years since, we were visited with an early frost, while late crops were on feed. A silk grower having a parcel of worms, wanting two or three weeks to finish, perceiving that there was danger of a frost to cut off the foliage, gathered, towards night, while there might be some dew on the leaves, a quantity of foliage, which he stowed into salt bags. These leaves did not heat or mold, but were well preserved for feed, so that the worms were enabled to form good cocoons.

That our climate is peculiarly adapted to the culture of silk, is confirmed by almost one hundred years operation, and corroborated by the silk record of President Styles, written some eighty years ago, and also by the journal of Joseph Clark. Gentlemen who have visited Canton, and are acquainted with the silk trade, uniformly agree that silk raised in the high districts of China, in a climate corresponding with ours, is worth, in Canton, twenty per cent over that raised elsewhere,—having a stronger fibre amd greater lustre.

Another important question to silk growers, is the best kind of silkworm. Some are satisfied with the large sulphur kind, enveloped with a superabundance of floss; others prefer the peanut variety, affording more silk than the other varieties. The superior excellency of the peanut variety, was testified by a silk manufacturer and dyer, before a court holden to take depositions to be used in a suit pending in Nantucket. It has been a common remark that silk culture, to be made profitable, should be connected with other farming business, and doing up the whole in a family way. An instance in point has occurred in this vicinity, where a person says he has and can make more clear profit from his small patch of Canton mulberries, than from all the products of his farm. But if worms can be fed with better success upon the open Chinese plan, in better ventilated cocooneries or tents, and the one and early crop system be adopted, and if the after foliage, and the bark of the young mulberry can be appropriated to any new and important use, as it is hoped may be demonstrated in another year, then, and in that event, the cultivator of the soil may go extensively into the business, with great safety and profit to himself, and thus contribute towards the demand for three hundred millions worth of raw silk, supposed to be annually wanted, to supply ourselves and foreign countries. There are silk producing and manufacturing countries, which do not raise enough of the raw material for their own consumption. It has been said that the English market requires annually, nearly one hundred millions worth of the raw material, and do not, as we understand, raise a pound of it. America must be very industrious for some years, to raise even enough for her own market, although it has been predicted that we must and can do it, and even more, within ten years. To accomplish which, however, will require a great multiplication of trees, not only for feeding worms, but for other important purposes, which have been suggested, and we hope will be accomplished by another year's experiment.

With us the demand for silk goods must annually advance, to supply the rapid increase of population.

In this country as an experiment, cotton began to be raised at no great distance of time from the present; for it is within the recollection of many of our inhabitants, when the whole operation was performed by manual labor—before Whitney's improvement for separating the seed from the cotton. This machine I saw placed at the head of Long Wharf, in New-Haven, in gone-by days, while a student in Yale college ; with the cotton between cylinders, to show the operation, and with what facility it could do the business. What Whitney's machine then was to encourage the growth of cotton, our inventions and improvements may be to promote the culture of silk. By uninterrupted perseverance in the culture of cotton, some sixty millions of that article is said to be annually exported, exclusive of the immense quantity manufactured at home for our own and foreign markets ; and why may not the same perseverance in the silk cause, be attended with corresponding success, and become a great national staple ? We have every facility requisite to diversify labor, and give employment to our increasing population.

It has been estimated that two-thirds of the exports of Italy consist of silks ; and in France, silk manufactures are among the most productive sources of national wealth. Our habits of industry, perseverance, and mechanical tact, are in our favor, and we entertain the opinion that there is no country where silk can be made of better quality, and probably at less actual expense than in America. Among the objections to our successful operations in the silk culture, is the sickness of worms, which occasionally occurred ; but it is thought that this may be obviated by the recent improvements recommended in the manner and time of feeding. A few years since, an Italian, conversant with the Italian mode of feeding, was employed in this town to feed worms. He took the business in hand in a spirited manner ; kept the cocoonery at a certain temperature by artificial heat. His employer, however, took a part of the worms and placed them in a separate room, kept the windows open day and night, (used no artificial heat,) fed wholly with branches, and cleaned the litter but once during the whole time, and the worms wound their cocoons one whole week earlier than those fed by the Italian, to his utter astonishment, and who probably thought this a queer country.

It is recorded that from time immemorial, until within a few years, in Europe, nearly one-half of the worms have annually perished, from causes, although not fully developed, yet from the mode of feeding, we can readily conjecture them.

Aside from this, the culture of silk in Europe has been considered a lucrative business. Having had the perusal of President Styles' Silk Journal, and that of Joseph Clark, of olden time, it appears that the general loss of worms was estimated at about one-third. We anticipate that this will be very much diminished by the adoption of open feeding, according to the Chinese method. This is emphatically a year of experiments, commenced but not completed. Let us hope for the best results another and another year.

DANIEL STEBBINS.

Northampton, Oct. 1st, 1843.

COMMUNICATIONS RECEIVED BY THE CONVENTION.

1. The committee have pursued the same general plan in the arrangement of these communications, that was adopted in the last report; omitting dates, introductions, conclusions, &c. No separate place has been assigned to the letters of manufacturers, but they have been thrown in promiscuously with those devoted more particularly to the culture.

2. A number of these letters were directed to individuals, and not originally designed for this convention.

3. One striking characteristic of these letters, and one which every reader will observe, is the extensive use of the "common reel and wheel," for converting cocoons into sewings, &c.; operations requiring the most perfect machinery. It is unnecessary for me to remark, that all such efforts at manufacturing silk, act directly against the real interests of the cause, and should be discountenanced. We have some specimens before us of sewings made in this way, which are really beautiful. Still the same cocoons from which these samples were made, had they been used properly, might have furnished a fabric of tenfold more value.

The cause assigned by the writers of very many of the letters is, that they have "no market" for their cocoons; and all seem to be united on the importance of well regulated local filatures and markets as a remedy for this evil. A remedy, it is believed, which would have the desired effect.

4. I have been obliged to copy all the proceedings and letters, and as they were placed in my hands only eight or ten days before the manuscripts were needed to accompany the annual report of the American Institute to the Legislature, have been obliged to make the preparation in the greatest possible haste, and it would not be strange if it should be found attended with some imperfections.

COMMUNICATIONS.

GEO. FITCH, *South Bridgeton, Me.*—Have fed a few worms for six years past, generally with good success. This season we have fed about 16,000 worms—had 49 lbs. cocoons: one building is thoroughly ventilated. I have about three-quarters of an acre of white mulberry trees, and a few hundred multicaulis, which afford much more foliage than the white, though I think worms fed on the white make the best silk. The ladies of one family have manufactured our cocoons into sewings, with nothing but our common household machinery.

HENRY LORD, *Hubbardston, Vt.*—I have been experimenting some for five years,—I use the morus multicaulis. Good success. Usually expose my eggs about the first of May, and feed several crops—about ten days apart—feed on solid shelves, and clean every moulting—can feed some ten days earlier here on the multicaulis than the white. Manufacture our cocoons into sewings and twist, and have made some cloth and hosiery from floss and poor cocoons with the addition of a little cotton, which are considered good: all done on the common reel, wheel, and loom. Have been unsuccessful this season, raising only 62½ lbs. cocoons from eight ounces of eggs. (These "solid shelves" may have had something to do with this result. Mr. Lord complains, that they have no market, as a reason for their resort to the coarse machinery they now use. His is one of many cases of the same kind. Much of our silk is nearly lost for want of filatures and markets. A. C. V. E.)

J. W. Chappell, *Lima*, *Livingston county*, *N. Y.*—Has been engaged in the business six years. Three acres of land employed—200,000 trees—$600 capital invested. Amount of cocoons prior to 1844, 420 lbs. In 1844, 660 lbs.—cost of the same for 1844, $60.—value of the same $300.

A. L. Newton, *Athens*, *Georgia.*—One family of young ladies, have manufactured for themselves three or four very handsome silk dresses, which have been much admired, and at a short distance would not be thought to be domestic manufacture. Several of our citizens have succeeded well in the manufacture of sewings. I have the largest, and perhaps the most extensive cocoonery in the State—it is 30 by 50 feet, two stories high, all filled with shelves, and stands in an orchard of about eight acres of the morus multicaulis, well set. I have not, however, as yet, done much at raising silk, but have the fullest confidence in the business. Dr. M. A. Ward, of our town, has been longer employed than any one else in this region. We have been three years engaged, raising ten to twelve bushels annually ; also Dr. Ward, Col. Craig, and one or two more, have produced annually about the same amount, but we have no market here, and to export the cocoons we find rather expensive : so some have become rather discouraged; there are still some of us, however, desirous of going on with the business, for we believe this country and climate precisely calculated for the culture of silk.

Miss Gertrude Rapp, Economy, Beaver county, Pa.

Sir—In conformity to the request expressed in the circular of your Institute, of July 1st, 1844, I send you for exhibition some of our latest manufactured silk goods, as per invoice annexed and bill of lading forwarded. They, with those from other sources, will serve as facts by which all reasonable doubters may be conclusively convinced that the production and manufacture of silk—this new and most important branch of national industry, for the promotion of which your Institute evinces such a praiseworthy zeal—is as possible, and can be carried on as successfully in this country as in any other on the globe. I have even the pleasure to be able to maintain, that we can do here what probably has never been done in any of the old silk growing countries ; namely, to go in regular succession through the whole process of the silk business in one season, beginning with the raising and gathering of the mulberry seed, and ending with the manufacturing of the wove silk fabric. All of which I can prove by the following facts: On the 30th and 31st of May of this year, we gathered a quantity of mulberry seed from a number of choice trees of the Canton variety, (which is the earliest of all kinds we are acquainted with.) On the following day, (June 1st,) we planted part of that seed in regular rows in several well prepared beds. In about ten days the seed came up finely, and as the weather was favorable, and no weeds suffered to grow with the young trees, they progressed beautifully and vigorously, so that on the 1st of August we were able to commence feeding a small lot of worms on the foliage of them; and as both trees and worms continued their growth in good proportion, the quality of the leaves was always very suitable to the age of the worms. On the 26th of the same month they commenced winding, and produced a small lot of very fine and good cocoons; the greater part of which we reeled, spun, twisted, colored and manufactured into a ribbon; the rest we kept for seed and other purposes, samples of which I send you with the other silk goods. They may be exhibited as a representation of the entire silk business, as performed in one season; and after the Fair, the worthy Institute will please accept them as a present. Said samples are put together in the following manner:

1st. Some Canton mulberry seed, gathered May 30th, 1844, contained in a vial.

2d. Three Canton mulberry trees, raised from that seed, sown June 1st, taken out of the ground September 23d, measuring without roots from three feet four inches to three feet six inches.

3d. A leaf from those trees.

4th. Three cocoons from worms fed on the foliage of said trees, hatched August 1st, spun August 26th.

5th. Three cocoons perforated by the moth, September 20th.

6th. Some silk-worm eggs produced by these moths.

7th. Two skeins of raw silk, two skeins of colored silk, and four yards of ribbon, manufactured from those cocoons.

We have now feeding on the leaves of the same trees another lot of worms, which look exceedingly well and will commence spinning about the 1st of October. A third and larger quantity is feeding on the foliage of a quantity of young Canton trees, raised from seed of last year's growth, sown on the 10th of May last, many of which are now over five feet high and full of excellent leaves.

From what I have said, it will likely be inferred that we give the preference to the Canton mulberry tree. We do so, for several reasons; and if we were to be limited to any one kind, we should unhesitatingly choose the Canton. But as the white Italian variety stands the winter best, we should not like to do without it, and every silk grower should be provided with a quantity of the same. We have about nine acres of common and Canton mulberry trees, and about the same number of acres should be covered with the Italian and Broosa, if those which were scattered were joined to those which are planted in regular orchard form.

We commenced the raising and manufacturing of silk on a small scale in 1826, and increased it gradually as our trees, experience and knowledge increased. Of the amount of cocoons prior to 1838, we have no correct memorandum. The total for six years previous to this present is 20,766 pounds; showing an average of 3461 pounds per year. Last year's product was but 5111 pounds, in consequence of two severe spring frosts, and very unfavorable weather during August and fore part of September.

The product of this year will be about twenty-five per cent less than that of last year, and will therefore not much exceed said average.

J. H. Cobb—*Sup't Silk Company, Dedham, Mass.*

Questions answered in order. No separate report for 1844.

No. years engaged,	20
Amount of capital invested,	$10,000
Amount of American stock used,	$1,000
do. Foreign,	$24,000
Total amount used,	$25,000
Male hands employed,	20
Female hands employed,	100
Children employed,	10
Pounds of sewing and twist made,	5,000
Yards of ribbons, galloons, laces, cords, &c.,	50,000
Pairs of stockings and gloves,	100
No. of cravats and handkerchiefs,	100
Total value of goods,	$100,000

As I first started machinery for manufacturing sewings in a regular way, with the latest European improvements, and have superintended the building and operations of the New England Silk Company's silk works in this place, I hold myself competent to contract for and supply machinery for the silk manufacture, and operatives skilled in the business, to go to any part of the country. I first sent the machinery to Hartford, for the old Connecticut Silk Company, and operatives to work it. I am now making making machinery on a contract, to supply a factory in Canada. The mill constantly under my direction in Dedham, and now in operation, is described in my Silk Manual, page 152, 4th edition.

Judge A. E. Ernest, *Macon, Bibb County, Ga.*—I have cultivated silk in my humble way for six years, and have bestowed much thought on the subject, and my candid opinion is there is not a finer country in the world for producing silk than Georgia. All my experiments, and the other facts I have to judge from, satisfy me beyond a doubt, that our climate is the very best. It seems to me almost impossible that any country can possess greater advantages for cultivating silk than we do. When I commenced the business I knew nothing about it, and my circumstances have been as unfavorable for getting information as could well be imagined; and yet, under all these disadvantages, I have been successful, and have made the business profitable. It seems to me that my well known success is saying a good deal for the silk culture in Georgia; more, certainly, than can be said of many new undertakings.

When people undertake any branch of business of which they are ignorant, they generally make wild work of it, and that is precisely what I should have done in the silk business if there had been any difficulty attending it. We can buy land in Georgia good enough to raise fine mulberry trees for almost nothing, and the mulberry grows from early in March to late in October, or early in November; and by adopting branch feeding, (which I think is best,) and availing ourselves of all the other advantages which we possess, there is no knowing to what extent the business can be carried on in Georgia, or the good that would result from it. It seems to me that if the silk culture was once planted among us, it would give employment and bread to every poor family in the country.

Last spring I hatched my silk-worm eggs, and twenty-seven days after they commenced spinning, although they did not get all the attention they needed. My shelves were four by five feet, and off of each we got as much as three pecks of cocoons. Both last year and this, when my worms were spinning, the weather was extremely dry and hot, and every day, in the heat of the day, I sprinkled the worms and floors freely with cold water, and feel confident it had a good effect. This year I used charcoal instead of lime, and think it preferable. I use it in the same way, but in greater quantities. Since I have been endeavoring to bring the silk culture into notice in this neighborhood, I have suffered greatly for want of information on the subject. I know pretty well how to treat the silk-worm, (for they get along here under almost any treatment,) but we think it is our interest and that of the cause, that we carry matters farther than this; but we lack suitable machinery to enable us to do so.

REV. ISAAC VAN TASSEL, *Perrysburgh Plain*, *Wood co.*, *Ohio.*—Has been engaged in the silk business eight years; three acres of land employed; one thousand trees; $100 invested. Amount of cocoons raised prior to 1844, 200 lbs; amount in 1844, 50 lbs. Being unacquainted with the business, have been mostly engaged experimenting with worms and fixtures. Has made two or three reels; one similar to the Piedmontese, superior he thinks; the other on entirely a new plan. It is turned by two treadles, or a double crank, by the reeler. The cocoons are in a copper basin, two feet long, with a division in the middle.

The water is heated by a furnace at one end, fourteen inches in length, and six in diameter. The water surrounds the fire and passes back and forth, from the basin to the furnace and heats in a very few minutes. The thread passes through a small throwster which gives a twist sufficiently to take in the added fibres with facility; and then passes through a traversing bar which spreads it on the reel in a wide skein. The thread is perfectly round, and as smooth as a polished brass wire. I trust government will do something for our encouragement.

D. STEBBINS, *Northampton*, *Massachusetts.*—In answer to your several questions propounded in your address, issued July 1st, 1844, I reply 1st, that my first attention to the silk business, commenced some ten or twelve years since. Second, I have now about ten acres of land apppropriated to mulberries, and am cultivating to enlarge operations, or to accommodate those who are destitute. I have just received orders for a parcel of genuine Canton, for shipment this fal to Lima, South America. Third, I do not know how many trees I have, too many however, to take the trouble to enumerate. They are chiefly of the Canton and Asiatic. Fourth, The capital invested consists of the land, trees and buildings; some of the land being near the central part of the village of Northampton, is very valuable, and as a whole might be worth $10,000. Fifth, No stated account of the quantity of cocoons raised from year to year, the great object being to show that the business was practicable.

6th. The same reply as the preceding may be made for 1844, with the addition that considerable expense has been incurred, by outlays for building, fixtures &c., and that the returns did not equal the expectations, (see ninth answer.)

7th. The whole expense incurred in, and about the premises for labor, and material, on an additional cocoonery, hurdles, cradles and other incidental expenses for 1844, amounts to about $250; but it is hoped that the proceeds may cover the expenses.

8th. The value as a whole is not depreciated by the outlay, the whole now being in good order for some enterprising person, to show what can be done in coming years.

9th. The feeder for the present year, not having been accustomed to a large establishment, undertook the feeding of too many worms at a time; having plenty of foliage, over crowded them and hoped to get his $800, but did not accomplish it; with the aid of two or three children, attempted to feed 800,000 at a time; ought not to have had over 500,000.

10th. Remarks. This year's experience sustains the position, that all things considered, early feeding is the most safe to ensure a good crop; but to have this result, constant and faithful attention, and an equal distribution of feed is requisite, day by day, or the result would be like the sample exhibited on the card, being fed on the same shelf at the edge or outside. The longer worms are kept on feed, the less silk will be produced from the same number of worms.

Worms carried through under thirty days, are estimated to yield 25 per cent more silk, than those kept on feed forty days or more. The way to produce the best result, is to feed the worms faithfully and equally, especially while young, and then they will be likely to pass safely through every change to the cocoon. Gill's ventilating cradle, is an admirable contrivance for the silk-worm, and is emphatically a labor saving and health saving machine, calculated to produce a fine circulation of pure air among them, and expel the impure, arising either from the excessive perspiration of the worm, or from the offal. Nothing offensive, should be allowed in or about the cocoonery. One great advantage of the cradle system is, the worms cannot be crowded as on shelf feeding. The silk grower being furnished with plenty of the genuine Canton for leaf feeding; and the Asiatic for branch feeding; and using the peanut variety of worms, with due attention, may reasonably expect a good return of cocoons. The present year's observation on the early production of foliage, from the different varieties of trees, has resulted in the fact, that the genuine Canton and Asiatic are the earliest in foliage, and the least injured by severe winters. Although an early crop of worms may be, and probably is the best, yet there may be a necessity of later feeding, where the foliage is cut off by early frosts. In such cases, or when worms are prematurely hatched, the use of dry leaves preserved, pulverized, moistened, and given them, will answer the purpose of green foliage. (*Probatum est.*) At any time, should sudden cold or damp weather occur, the worms would bear a little artificial heat without any injury.

Our soil and climate are admirably adapted to the production of silk of superior quality, which sells for $5 per pound, while the foreign article may be had for $4 or $4.50, and sometimes less. To promote and aid the culture of silk, some legislative bounty is requisite to encourage beginners in the new and untried business of silk culture. A bounty, together with the ingenuity, skill and perseverance of Americans, would enable us to compete with the cheap labor and cheap living of any nation. Three thousand worms have been considered the average number requisite to produce a pound of silk ; but 2,000 to 2,400 of the pea-nut variety, well fed, have done the same ; yet of the Chinese variety the cocoons are so small, (not one-quarter as large as ours, and withal thin and soft,) that some 10,000 or 12,000 may be required to produce a pound of silk, as has been seen and tried in the Sandwich Islands. Mr. Titcomb, a silk grower in one of the islands, crossed the Chinese with the American, and found that the cocoons were yet so small as to require from 5,000 to 6,000 to produce one pound of silk ; while of the American, 3,000 would do the same thing. It is the opinion of gentlemen of high standing that America *may* and *will* become a silk growing country. One gentleman, who presides over one of our oldest and most eminent literary institutions, under date of June, 1844, writes me : "If this earnest waking up to a scientific and practical consideration of the subject, (silk culture) is not soon crowned with signal success, it will not be for want of enterprise or skill in our countrymen, but merely from the high price of labor here compared with the scanty wages given in other silk growing countries ; even this consideration, though it might retard for a while the complete success of this department of productive industry, will not prevent its ultimate triumph." Another gentleman, under date of August, 1844, writes from the far west : "That the soil and climate of the west and southwestern States are admirably suited to the growth of mulberry, and rearing silk-worms, and that eventually, the two great staples of the western and southwestern States will be silk and wool." Some silk growers are sanguine in the opinion that the whole mulberry patch (except the roots) may be annually used up for valuable purposes ; it has been done by other nations, and if we cannot do it we forget our character for enterprise. I allude to the use of the after foliage of the mulberry, and the bark of the annual sprouts ; the former for making paper, and the bark for manufacturing fabrics ; both have been made in France, and Mons. De Lapiere obtained a gold medal for the production ; paper has been made in America of the leaves of the mulberry; even in this village unbleached paper has been made for the special purpose of millers depositing their eggs upon—a dark material agreeable to their natural habits. On this paper a letter was written to a correspondent, who, under date of Sept. 5th, writes—"that the mulberry paper excites great attention, and is liked very much for steel pens." A quantity of Canton foliage is now being cured for bleaching, to make writing paper as soon as the mills can take it. The Canton retains its verdure in great perfection, later than any other variety. Col. Green, of this place, presented me specimens of late feeding upon the Canton and multicaulis, separate from each other; the worms fed upon the Canton were evidently larger—spun two days earlier—and the cocoons are sound and larger than those fed on the multicaulis; the worms were of the same hatching, and fed with equal attention. It has been satisfactorily ascertained in this town, by competent skillful operators, that the pongee silk—so called—of foreign make, is a vegetable production—perhaps mulberry—and never operated upon by the silkworm.

There can be no reasonable doubt about the ultimate success of silk culture in some future years; but to accelerate such a desirable event, which may constitute an important American staple of revenue, which shall not only enrich the government, but reward the labor of present enterprise, a bounty seems necessary to stimulate and encourage the agricultural population to commence operations in a new and untried crop. We import annually some twenty millions worth of raw and manufactured silks, the product of foreign enterprise and industry, to promote which we voluntarily become the consumers, instead of being the producers. Let the laboring class be encouraged by a reasonable bounty, until the silk culture shall be extended over the whole length and breadth of the land, and every dollar expended in bounty will be returned to the treasury one hundred fold.

Michael Klyne, *Reamstown, Lancaster co., Penn.*, has been four years engaged; has three and a half acres employed; 20,000 trees; $250 capital; raised 608 pounds of cocoons prior to 1844, and 358 pounds in 1844; cost this year $15, value $120. Enclosed I send one skein of sewing silk made on a machine of my own construction. One hand can make six hundred such skeins in a day, from the hanks as they come from the reel. I consider the question of silk growing settled. The soil and climate being congenial, with good eggs, the silk grower has nothing to fear, but every thing to encourage him to hope for a *better* return than can be realised from any other agricultural pursuit.

James Walker, *Frysburgh Island, Me.*, expresses much confidence in the business; has cultivated the mulberry tree for ten years, but has fed only a few; has made 1,200 skeins of sewings, twisted on the common woolen wheel. We cannot feed as long here as in warmer States. We begin about the middle of June and feed until in about September. Thinks the silk culture can be made as profitable here as any agricultural pursuit.

Harvey Loomis, *Otisco, Onondaga co., N. Y.*—I have been engaged in the business for two years. The first, I made 39 pounds of cocoons, which I had manufactured by a lady near us, who made of them 1,000 skeins, which were pronounced by tailors a first rate article, equal in every respect to the Italian, except in gloss. The fibre was stronger and better, and found a ready sale at $3 per hundred at the stores, and it there retailed at four cents per skein. This crop will bring about $35. I shall increase my orchard next spring to twice its present extent. The bounty received in this county last year was $162.

JOSIAH EVERETT, *Otisco*, *Onondaga co.*, *N. Y.*, has about two acres of the white Italian trees, set in rows about one rod apart and about eight feet in the row; has this year raised 47 pounds of cocoons, very fine; first crop hatched the 1st of June; second crop, last of June, twice as large, nearly all died; the nights were very cold; fed in an upper room, lathed and plastered, with the windows up and blinds closed much of the time. (We hope soon to hear from the *last* attempt to raise silk worms in plastered rooms. It is unnecessary to say it cannot be done.—A. C. V. E.)

J. M. SUMMY and D. EBERLY, *Manheim*, *Lancaster co.*, *Penn.*—Questions answered in order.

No. of years engaged	6
Acres of land employed before 1844	3½
Now planted and prepared for planting	13
No. of pounds of cocoons prior to 1844	3366
No. of pounds of cocoons in 1844	1500
Capital invested	$500

Cost in 1844 not known, as the planting and re-planting were all done by the same hands, and we are not yet near through, as we have been reeling considerably for our neighbors.

JOHN BORDEN, *Brooklyn*, *Ohio.*—We have raised this year 170 pounds of cocoons, being but one half our usual crop. The reason of our failure was an untimely hatching of our eggs, in the cellar, occasioned by extreme warm weather in April. I had previously removed my eggs to an ice house for our second crop, which was the only crop we raised, there being no eggs in this vicinity we could get. I should advise every silk grower to put all his eggs in an ice house before the warm weather commences.

For nine years we have been invariably successful, with the exception of the first and present years. We have had about 350 pounds, annually. We have two acres of trees in close drill; the rows four feet apart. Our cocoons cost us about $1.25 per bushel. There is no market in this part of the State; hence we reel our own cocoons and send the raw silk to New-York for market. Nett proceeds from $1 to $1.50 per bushel. The greatest and the only difficulty is, the disease of the worms, which I contend is entirely unnecessary and may be avoided by proper care. (Open sheds, or tents, will do the thing. A. C. V. E.)

TIMOTHY WHEELWRIGHT, *Wells*, *Gogunquet P. O.*, *Me.*—I have been engaged five years, and always had good success. My object has been to test the feasibility of the culture. I have been obliged to reel and manufacture my own cocoons, from the fact that we have no market. What we have made has been on the common wheel, but pronounced a good article by those who have used it. Some of it has been wrought into gloves, mits, &c.

Previous to this year I have made 110 pounds of cocoons; this year, 50 pounds. I have three acres, containing six or seven thousand trees of the white, and eight hundred multicaulus and Canton, which I shall multiply as rapidly as possible.

Samuel Barrett, *French Creek*, *Lewis Co.*, *Va.*—About the first of June I hatched 3,000 worms, for the purpose of testing the quality of my eggs, and as a kind of first fruits of the season; they were more healthy, and made better cocoons than any I have before raised, 265 making a pound.

J. Payson Van Epps, *Fairmont Nursery*, *Laurens*, *Otsego county*, *N. Y.*—I will give simply in this communication, a few extracts from my Journal in the silk department, as another item in favor of the feasibility of silk culture in the United States. "May 28th. Have just finished planting my second load of multicaulis, nearly three acres, furrows drawn six feet apart, about 5000 trees, averaging three feet in length, roots and all—nicely buried, being laid horizontally in the drill, the tops uniformly up hill. July 26th. My nursery looks promising still. I dare not venture to feed over 10,000 worms; the lot of one thousand have moulted the first time, having subsisted upon lettuce mostly. September 4th. I have been very careful in preserving the leaves to the last age—cutting the stem with a pocket scissor, in order to preserve the bud. Have about fifty thousand trees and an abundance of foliage left, after taking through a very respectable crop of worms."

And now, as a deduction from the above, allow me to say, that no doubts should be entertained for one moment, upon this interesting branch of American industry. If farmers will only take hold of the business in a rational manner, acquaint themselves with the habits of this interesting and valuable insect, it can be made a profitable acquisition. I think the American Institute deserves the thanks of the people of the United States for their efforts to settle the great question of silk growing in this country.

P. H. Green, *Northampton*, *Mass.*—To the members of the New-England Silk Convention.—The silk culture in the United States attracted my attention some two or three years ago, since which I have not been an indifferent observer of what has appeared in the public prints, and other publications relating to the subject. These, with other evidence, has convinced my mind, that at no distant period silk will rank among the most important productions of our country. Being desirous of obtaining practical knowledge, early last spring, I leased in this town about five acres of land, four of which had, five years before, been planted with from 12 to 14,000 Alpine, Asiatic, multicaulis and Canton roots and cuttings. Two places were fitted up for feeding; one put under the care of a person who had fed several years, and acquired the reputation of being a good feeder. No information would be conveyed by detailing the facts attending this attempt; it is therefore only necessary to add, that it disappointed both the feeder and myself. The other was reserved for myself, and the result more than met my expectations, being wholly unacquainted with the business. A full remuneration for the labor and other outlays were not among my most sanguine thoughts, of course I am not greatly disappointed—still I may, I think, truly say, that had the other feeding succeeded as well as that under my own care, although no profit would have been realized, an encouraging return would have been made. Three ounces of eggs were hatched, and the worms carried through, feeding principally without loss, except at the time of winding, when the weather was extremely cold and unfavorable: notwithstanding, I had two hundred pounds of good cocoons from three ounces hatched. It is deemed unnecessary to trouble the convention with detail, and I will therefore only subjoin the result of my observation and experience from this feeding, and what has been done, and is now doing in other countries not so well situated probably as our own. I have therefore come to the conclusion, that with the intelligence and means practiced there, silk may be made an advantageous crop even in Massachusetts. The culture of silk in France was established by the bounty of government, and is now a source of great national, as well as individual wealth. Nothing is hazarded in saying, if it is established here, it must be done by the united effort of government and individuals. Since the discontinuance of the bounty, thousands of mulberry trees have been dug up in this and neighboring towns; and without prompt action on the part of the Legislature, thousands now are destined to the same fate.

(The above, as will be seen, was addressed to the N. E. Silk Convention. The letter of this gentleman to the National Convention, is of great length, and as a part of it is a recapitulation of the above, it has been omitted. A. C. V. E.)

It was my design to feed three broods of worms in succession, so as to have the last brood wind up by the middle of August. In accordance with this plan, I took three ounces of eggs from the cellar, when the temperature was 54° Fahrenheit, placed them in a room where it was 60° on the 13th of May; on the 17th, removed them to a room where the temperature was regulated by artificial heat, and ranged from 62° to 73° until the 27th, when the hatching commenced—28th, 29th, 30th, and 31st, all hatched or nearly so. While the temperature was at 70° or over, the young worms were active, but became somewhat torpid when it was 64°—ranged from 65° to 70° until the 3d of June, when the whole were placed in the cocoonery. On the 4th, temperature down to 46°, worms quite torpid, supposed it all over with them, but revived on the 5th when it was 70°, and went through perfect moulting, perfectly healthy—continued so through the 2d, 3d, and 4th,—changed them after each moulting excepting those put into the cradles, which were placed there immediately after the third moulting, and were not again changed. Some hundreds of the worms fell into the troughs of the cradles when first put into them: supposing them to be lost, no notice was taken of them till the third day, when it was deemed necessary to wash them out; accordingly a bucket of water was turned into the trough at the upper end; of course the worms were carried out at the other end. This immersion, as well as fasting, had not as was expected deprived them of life; indeed, had made but little change in their appearance; they were therefore all secured, by placing a sieve at the lower end of the trough, placed on dry shelves, food given them; and in order to ascertain whether the drenching and fasting would have any unfavorable effect, a particular place was assigned them; they went through feeding in all respects as the others, and made as good cocoons.

Judging from this and other facts that subsequently came under my observation, I feel warranted in saying, although drenching worms for a short length of time before the fourth moulting may do them no essential injury, yet nothing can be more fatal than to keep them in a wet or damp place, particularly when about forming and completing cocoons. Worms hatched May 28th and 29th, were put into the cradles and on the lower shelves in the loft; the last hatched on the upper shelf, near the roof; as they approached towards maturity, it was found that all were too much crowded, and about one-third were removed to a shed. All continued healthy, and about the first of July commenced winding. On the morning of the 4th, the temperature was 50°,—on the 5th, 48°,—and several succeeding days, about the same. This was a severe shock to the worms,—indeed, it so paralyzed a considerable portion of them, (probably from 10 to 20 per cent,) that they seemed to lose the power of making cocoons, grew chubby and died.

It was apprehended that the loft, in warm weather, would become so hot as to have an unfavorable effect on the health of the worms. But instead of this, the least loss was on the upper shelf, where the last hatched were placed, and spun as early as the first hatched, and made quite as good cocoons. From the fact that the worms, while young, were not injured by being subjected to a temperature of 46°, and about the same, at a more advanced age, had such a paralyzing effect, that a considerable portion never recovered, it is inferred that a warm temperature is more essential during the last than first age of the worms. The product of the three ounces of eggs, was two hundred pounds of good cocoons. It is deemed proper to mention, that the lower story of the building is separated from the upper, only by a partial floor, so as to give a free circulation of air through the whole house. The windows have sliding shutters below, and in the loft, a door at each end, but no windows or other openings in the roof; also, that chloride of lime was placed, in small quantities, in all parts of the building, and fine unslacked lime sifted through a bag made of coarse cotton cloth, on the worms, in wet, damp weather, immediately after feeding. This not only absorbed the dampness, but is believed to have contributed to their general good health.

I found by experience that the chrysalides could not be destroyed by the use of charcoal. A description of the plan, manner of fitting up, &c., is not thought necessary. The experiment was, however, conclusive, and it is confidently believed, that whoever makes the same attempt, will find that a portion of the chrysalides will not be destroyed.

A better mode of destroying them, and which proves effective, as well as every way satisfactory, is one recommended by Mr. Banne, a distinguished French chemist, which is as follows: Dispose the cocoons in a wooden box, in a stratum of six inches deep; upon each superficial square foot of these, half a pint of alcohol sprinkled from a water-pot so as to distribute the liquid equally over the cocoons; (Mr. Paine says one gill per bushel is sufficient. Have you tested this ? A. C. V. E.,) then form another stratum over these, and a farther quantity of alcohol applied, and so on until the box is full; then closely covered up and left twenty-four hours. Instead of a box, I used a barrel that had contained alcohol,—cut a space ten inches square in the head,—nicely fitted a board with lists on each edge, so that when it was shut down, all the air was excluded from the barrel. This did the thing perfectly.

With regard to the succession of crops before mentioned, the eggs reserved for them were placed in a cellar where the temperature was fifty-four, and according to the opinion of some writers on silk culture, they would not hatch without being exposed to a temperature above sixty. Contrary to expectation, as soon as the mercury went up to this point the eggs hatched; this too, when I was wholly unprepared for them, having neither feed, space nor time to attend to them; of course they were lost. Not willing to relinquish my plan altogether, about two-thirds of an ounce of eggs were procured, which hatched the twenty-third and twenty-fourth of July; these went through their first and second moulting on the sixth and twelfth days of their age without any loss, third nearly as well, fourth not so successful, the weather about this time, being rainy and extremely cold for the season, with constant sudden changes, which produced torpidness of the worms from which they never recovered; a considerable portion of them formed cocoons, but few perfected them. The first part of the season is unquestionably the best time for feeding, still it is believed with proper attention to selecting feed, congenial temperature, say about seventy or above, natural best, but if this cannot be had, artificial for later crops, may be successfully used.

Much has been said and written about open feeding; no matter how open, provided all other requsites can be had. In the humble opinion of the writer, whoever expects to produce a good crop of cocoons from worms subjected to wet or damp atmosphere for any length of time, and to a temperature below sixty-five, will be sadly disappointed. In Lombardy, Italy and France, the great silk growing countries of Europe, the temperature in cocooneries is not only regulated with great exactitude by artificial means, and the atmosphere corrected from time to time as occasion may require. In those countries, the feeding season lasts but six weeks, and there is certain as any other agricultural product.

There the leaves from trees (not annually cut down) are used; of course but one crop can be produced. This is no objection to a succession of crops in New-England, where the trees are cut down in the spring, early shoots cut and fed to the worms, and later ones constantly springing up, suitable for feeding.

That the United States are at no distant period to become a great silk growing country, is more than probable; that New-England will show largely in the product is not so certain. While the foreign producers and others interested, are watching with eagle eyes, the progress of silk culture in this country, at all times prepared to overstock our market with raw silk, and constantly doing so for the express purpose of checking its culture here; while not one in five of our citizens who engage in it are remunerated for their labors and other outlays, while thousands of mulberry trees in this and neighboring towns, have been dug up, and thousands more destined soon to share the same fate, and while the whole subject requires systematic investigation and revision as well as simplification, it cannot be reasonably expected that individuals, without assistance from government, will make the necessary advances to compete successfully with such formidable obstacles. Indeed it requires no prophet to predict, that should no aid from government be speedily given, the silk culture in Massachusetts will soon be numbered among the things that were.

Dr. B. Blakesley, *Newark, Wayne co., N. Y.*—Your silk circular came duly to hand, and having no remark to offer that will be interesting or useful, I simply forward an answer to your inquiries. It will be seen that I have eight acres of land devoted to trees; but I have not used the fourth part of them for feeding worms. I intend to enlarge my operations so as to use the whole.

No. of years engaged	4
Acres of land employed	8
No. of trees, about	200,000
Capital invested, (only half employed)	$1,000
Pounds of cocoons prior to 1844	581
do in 1844	334
Cost of the same in 1844	$50
Value of the same	$75
Bounty on same	$50

G. W. Fargo, *South Solon, Me.*—Having perused whatever fell in our way on silk, we caught a little of the fever. We had a few years before planted a few white mulberry trees, out of mere curiosity. We used their foliage last year with the best success. This greatly increased our zeal. Have enlarged our operations this year. Our first hatching was on the 1st of June; our second, the 20th of July. The first wound in thirty days; the second, in fifty-five, after hatching. The cause of the difference was extremely cold weather during the last feeding, especially the nights; the thermomter seldom rose to 70° at mid-day. Our experience convinces me:

1st. That the white mulberry (in this State) is best, and other varieties as per the following order: 1st, Broosa; 2d, Canton; and lastly, the multicaulis.

2d. That worms will live and grow, wind and make good cocoons, on any variety of the mulberry, with proper attention.

3d. That there is scarcely a farm in the State of Maine which does not include some portion of land on which the mulberry will live, and annually yield foliage for the profitable culture of silk.

4th. That the greater proportion of failures are the result of ignorance or inattention; mostly the latter. Perhaps, however, ignorance may be the cause of inattention, in many instances. In rainy weather—[much less in fair weather—A. C. V. E.]—it will not do to put off till to-morrow what ought to be done to-day.

5th. That pure air and cleanliness are the main things in rearing worms.

6th. That a steady temperature of about 70° will, with proper feeding, greatly promote the growth and productiveness of the worm, and shorten the time of its labors; especially at the time of winding is such a temperature indispensable. This is important at the moultings also.

7th. That wet leaves will not injure worms, if lime be used and they be more frequently cleaned. Salt is good in wet weather.

8th. That sick worms may be restored by the use of lime.

(It will be a most happy thing for silk worms when this cleaning, liming, salting, warming, &c., can give place to the more successful plan of feeding on open frames or cradles, and their foliage placed before them as nature designed it should be—on the branches.—A. C. V. E.)

LUCIUS CARY, *Moreau*, *Saratoga co.*, *N. Y.*—I have been engaged in the culture of silk in a small way for four years. In 1838 I raised about 33 pounds of cocoons; in 1844 about 135 pounds, and had foliage enough to have fed 200 pounds more, which were lost in consequence of not having eggs. Live and learn.

We have reeled the same and received encouragement to persevere. Took the premium of the American Institute in 1843; also the first premium at the State Fair at Poughkeepsie. (Is not this encouraging?) My reeler had never seen a reel or reeled silk; have picked our leaves and fed on shelves; our worms wind in oak bushes.

(Mr. Cary took also the first premium at the 17th annual fair of the American Institute.—A. C. V. E.)

HUGH CASSIDAY, *Eden*, *Effingham co.*, *Ga.*—Answer to questions regularly given.

No. of years engaged	5
No. of acres of land employed	12
No. of trees	25,000
Capital invested, not known.	
No. of pounds of cocoons prior to 1844	200
do do do in 1844	230
Value of cocoons, ($3 per bushel)	$70

The cocoons we have reeled, and are making into sewings, which will be worth nearly $200 in this place.

HENRY CHAPIN, *Canandaigua*, *Ontario co.*, *N. Y.*—I have not done much this season, but have been cultivating my trees to enable me to do more next year. I began on the 20th of June with an ounce of eggs, and they have done well; were healthy, and spun good cocoons, 20 pounds. I am satisfied that early feeding is much the best.

There is no market in this part of the country. I am satisfied that the business can be made profitable. I have two acres; all multicaulis.

Wm. R. Massey, Esq., *Alexandria, D. C.*—In 1841 I fed about 30,000, which produced me some five or six bushels cocoons, the worms fed were of the small sulphur variety, and were entirely healthy. I believe I did not lose one worm in one thousand. I recollect distinctly that but eight worms were found dead after they had gone beyond their third moulting. There was no expense incurred during any of the above seasons; I gathered the leaves and fed them myself. In 1842, Mr. McCormick and I concluded to try an experiment on a larger scale; we purchased five ounces eggs, of the mammoth sulphur kind, and these produced us thirty-five bushels cocoons, all good; we fed in a large room, forty-five by one hundred feet, which had been quite empty of any thing attractive to vermin, for a considerable time; of course that season we lost but few worms by them. We purchased five ounces peanut eggs, but they proved not good, and therefore we took no account of them in our crop of that season. I reeled myself, the cocoons yielding about twenty-five pounds raw silk, exclusive of those reserved for eggs. Encouraged by our success, we embarked more largely in the business in 1843, and hatched fifteen ounces eggs at once, from which we got about forty-five bushels cocoons; the mice by this time had found their way into our feeding room, and destroyed, I think, fully one-third of the worms. In the same room we were feeding last season at least the worms from thirty ounces eggs, by far too many for our room, unless much better ventilated than it was or could be; yet the worms were remarkably healthy, and we should doubtless have made over one hundred bushels cocoons, but for the rats and mice, which beset us in unusual numbers, and destroying two-thirds of our crop. We gathered about forty bushels cocoons.

Experience has taught us much in relation to the silk-worm. First that there needs not to be so much ado, about houses to feed in, or costly fixtures to feed on. Early feeding, in open tents, I am sure is far preferable; having tried many experiments, I readily conclude that light, (until the time of winding,) and air, are the chief requisites for the health and yield of the worms. Cold, I am very sure, is not so injurious to them as heat, and a close atmosphere. Tents can be so constructed as to give the whole family of worms a constant supply of fresh air, and the fixtures may be so arranged as to prevent access by vermin. Cocoons, we think, may be raised at an expense not to exceed one dollar per bushel; we prefer the mammoth sulphur, because the worms are more hardy, and the cocoons reel more freely.

P. S.—We feed the morus multicaulis, of which we have sufficient to feed a million and a half of worms.

Clark Avery, *Perryville, Madison county, N. Y.*—Pursuant to the published request of the trustees of the American Institute, I forward to you an account of my operations and success in the silk business. My labor is done by myself and family, in connection with farming and domestic matters, and hence I cannot make a full report; but, such as it is, I forward to you.

1st. I have raised about eighty pounds of cocoons this year.

2d. Have raised about three hundred and forty-three pounds prior to this year.

3d. Have about one acre of land employed in the business.

4th. Have been engaged in the business five years.

I think branch feeding, after the third moulting, is better than feeding leaves; it appears to be natural and agreeable to the worms, separates them from one another, and secures a free circulation of air; and when they do not all moult at the same time, feeding those that are not moulting, raises the pile above those that are, and leaves them in the pile, where they are undisturbed until they have moulted, and then they immediately come to the top to partake of the foliage.

Experience has taught us that a cocoonery should be well ventilated, and the freer the circulation of air, the better. I reel, spin, and make what I raise into sewings and twist, in my own family. We use the Piedmontese reel, and spin it on a common wheel, and make an article of such quality, that it drew the second premium, ($10) awarded to "Manufactured Silk" at the recent State Fair; also the highest premium was awarded to our cocoons, on reeled silk, and on sewing silk, at our late county Fair. I intend continuing in the business, and enlarging my operations.

Jeremiah Upham, *Dudley*.—I received your silk circular, soliciting facts from silk growers. In reply, I would say,

1st. My operations have been small, yet I have been more or less acquainted with growing silk for twenty years; a few pounds each of the last four years.

2d. My experience testifies decidedly in favor of early feeding, also in favor of an abundant circulation of air. We have much more to dread from heat than from cold, especially sultry, damp weather; hence the necessity of having our worms, especially in the last stages, in some tent or open place, where they can have a free circulation of air.

3d. With plenty of foliage, and good eggs, and a suitable place for feeding, accompanied by proper care and attention, there is no difficulty at all in making silk of first rate quality, and with as much profit as we realize from any of our ordinary farm crops.

Enoch Bacon, *Southbridge*, *Mass.*—Commenced feeding in 1842, and produced four pounds two ounces of silk, and some eggs.

In 1843 produced about the same quantity, and in 1844 sixty-one pounds of cocoons.

Samuel Gates, *Highgate*, *Swanton P. O.*, *Vt.*—Commenced by answering the questions contained in the circular.

No. of years engaged, ...	5
Acres of land employed, ...	1½
No. of trees, ...	51,000

Amount of capital invested,	$300
Amount of cocoons prior to 1844,	223
Amount in 1844,	164
Cost of the same for 1844,	$22.75

Value of the same, not known.

Has one-half acre of Alpine, and one acre of multicaulis; prefers the latter.

Has had bad luck in feeding more than one crop in a season. Intends to adopt the one crop system hereafter.

Has formerly fed in a close building, with disease and loss, but now feeds in his orchard in an open building, and is highly pleased and satisfied. His cocoons have been manufactured in his family into sewings, twist, shawls, &c., and meet with a ready sale.

(We would not wish to discourage, in any manner, this commendable industry; but it would be a hundred-fold better for the cause, and for all engaged in it, could every culturist find a good market for his cocoons as soon as completed. It is pre-eminently a business of experience, and it cannot be expected that it will be carried to any very great perfection, when manufactured in such small parcels, as it must of necessity be in this way. Many of the specimens received evince a degree of skill and perfection which could hardly be anticipated under such a divided attention. A. C. V. E.)

Francis D. Wait, *Cantwell's Bridge, Delaware.*—In compliance with the circular of the American Institute, I will give a detail of my experience in the culture of silk, which commenced in 1838. For two or three years did not accomplish much. In 1840, '2 and '3, raised 1451 pounds of cocoons. I have 4½ acres of trees, numbering about 32,000 multicaulis; have $1200 capital invested; cocoons raised this year, 620 pounds, on which the bounty was $94; or sufficient to cover all expenses.

I made last year 50 lbs. sewings and twist. Fed this year mostly in Gill's cradles, under a tent, but not so successful as heretofore. I did not obtain more than 50 lbs. of cocoons from an ounce of eggs; before, nearly or quite 100. The weather has been very cold the fore part of June; the thermometer sometimes down to 48° in the morning, and could not feed until 11 o'clock; hence our feeding was protracted to forty days. Temperature should never be under 70° if it can be avoided. Must have artificial heat. It lessens the expense, for without it the feeding is protracted ten or twelve days. This depends upon the season of course; for sometimes you can do without artificial heat, and at others you cannot; therefore it is always best to have it at command. I should therefore recommend a tight shed with a cellar containing a furnace. The sides and end of the shed might be made of pannel doors or windows, hung like blacksmiths' windows; reaching down to the sill. I am now getting my cocoons reeled; some days nearly a pound. This fall I shall have to plow up my trees and replant in the spring. In consequence of hard usage, some of them are dead, and dying, and otherwise defective. My trees are now three feet apart in the row, and the rows four or six feet apart. I shall try the business a year or two longer, with the hope of doing better.

D. Mack, *Secretary Northampton Association, Mass.*—Below I have endeavored to answer the inquiries, and comply with the wishes of the trustees of the American Institute, as expressed in their circular.

Number of years engaged	5
Acres of land employed	30
Number of trees	145,200
Whole capital invested	$1,000
Amount of cocoons in 1844	1,500
Cost of the same per bushel	$2
Value of the same, 150 lbs. silk, at $5 per lb.	$750

Though we have thirty acres employed, we have fed all our worms from the trees grown on one-half of the lot. We use and prefer the Alpine, imported by Mr. Whitmarsh, some of which have grown this year between seven and eight feet high, with some leaves six by eight inches. We have a large quantity of well rooted trees of this variety for sale.

Our cocoonery is 100 feet long by 25 wide; enclosed with boards, several of which are moveable, for ventilation. In order to prevent noise, and to save expense, the floor is the bare earth, which we occasionally sprinkle in order to prevent dust. Ventilation is also promoted by raising the sills on posts, and by fourteen scuttles in the roof. There are two rows of feeding racks the whole length of the building, five tiers high with a wide alley between the rows, and narrow ones at the sides. Next year we intend to excavate a cellar to keep the foliage moist when we have a large supply on hand.

The greatest obstacle to the complete success of the silk enterprise in this country, has arisen from defective reeling. Well reeled American silk is worth more than any foreign silk in market. To reel well on any reel in common use, requires considerable practice, more than can be obtained in reeling the small lots usually raised in families. It would therefore greatly benefit the cause to establish filatures where the producer can find a certain market, and from which the manufacturer could be sure to obtain well reeled silk. We have established such a filature, and will reel good cocoons for $1 per bushel, or as we are manufacturing sewings, will purchase the cocoons, or the silk after it is reeled, at a fair price. Good cocoons must be well cured, assorted, and transported. The best means of curing them is to sprinkle them with alcohol, at the rate of about one gill to a bushel. Steam, or coal gas, are also good.

In sorting the cocoons; class them as follows:

1. Quality consisting of perfect cocoons, or such as are firm, compact, and free from all stains or spots.

2d. Such as have one end terminating in a point, but are otherwise firm and sound.

3d. Large, and free from spots, but thin and less compact than the first.

4th. Double cocoons.

5th. Those in which the worm died before completing its cocoon.

6th. Such as are spotted, or otherwise damaged.

Cocoons should be transported in boxes or barrels to prevent their becoming bruised.

We have also invented a reel, which will save fifty cents per pound in labor and waste, and make more and better silk than any other with which we are acquainted, and on which a beginner can in a few days make good silk. The reels are so small that they can be transfitted at once to the doubling frames, or the silk may remain on them and dry, or, be taken off and packed for market. By them are produced the same results sought to be obtained by others, but by entirely different means, but without exposing the silk to knot or break in doubling. We shall have a model for exhibition at the Fair, and having patented the invention, shall be prepared to make them, and set them up for filatures or private families.

We will also purchase the silk reeled on them if desired.

We have one machine carried by water power, with eight pans connected together, and are heated by steam and supplied with cold water. There is one transverse motion for all the reels, which are 16; (two for each pan,) yet each is separately fitted to be in or out of gear. With this, Mr. Paine with seven boys, (aged from 12 to 16 years,) after a fortnight's training, can reel nine pounds per day of ten hours, and better silk than the best Canton, and with very little waste. Mr. Paine, himself, can reel two pounds a day, with half the waste made by a common reeler. An English manufacturer in this town, has procured samples of raw silk reeled in this way, to send to England, as the result of American ingenuity, and of our success in improving the silk manufacture; which samples he pronounced superior in evenness, color, and finish, to any he had ever seen.

We invite the friends of silk culture to examine critically our reel, and to pronounce decidedly on its merits.

(We have this reel (with some improvements,) now in our filature, at New-York, and shall ere long comply with this invitation. Has Mr. P. seen the reel described in the letter of Mr. Van Tassel?

A. C. V. E.)

Edward Valentine, *Silk Manufacturer*, *Northampton*, *Mass.*—I have just seen O. D. Paine's silk reel at work. I believe it a good improvement. If I could buy my stock reeled the same way, I should buy no other.

Geo. W. Fargo, *Passadumkeag*, *Me.*—Has much confidence that silk growing can be made profitable even in Maine. Says our worms wound well after about 50 to 60 days. Experience has shown us, that worms will live, and grow, and wind, being full fed at one time and half starved at another, when fed on different kinds of mulberry at different times, or on all kinds mixed. Indeed we can raise worms to perfection, if we have the feed. The cold weather retarded their progress, the nights particularly. The thermometer at no time during the summer reached 70°.

A. C. Van Epps, *Auburn*, (*now of the New-York Filature*, *E. New-York*, *L. I.*)—My feeding has been done in a tent, 24 by 80 feet, covered with boards, and otherwise enclosed with canvass. In this, my eggs were hatched and worms fed. I have fed on the multicaulis, exclusively. For the last ten days I cut off about six or eight inches of the top and fed to young worms. I think most of the objections which have been urged against this variety of the mulberry have arisen from the feeding of the tops (which are very juicy and contain but a small proportion of the saccharine matter,) to worms requiring stronger food. One acre should produce more foliage than all my worms have eaten this season. Yet, although we fed from four or five acres, our teams were out for several days, scouring the country for eight or ten miles around Auburn, in search of mulberry. We fed two crops of about equal size. The first produced four-fifths of our cocoons. The second, being fed on various kinds of imported foliage, proved an expensive operation. Should I again meet such an emergency, I should throw my worms away by all means. The same labor and expense which this year secured for us only about 300 pounds of cocoons, under favorable circumstances would have returned at least 800 or 1,000 pounds. The cause of so small a yield of foliage from our several acres of trees, was, that nearly all of them have stood in the ground as the crash left them, without any cultivation or care whatever.

The question was frequently asked us previous to this year's feeding, " What are your views of the silk culture ?" To which we answered, " This year must decide. We have good eggs, good foliage, and an abundance of the purest air of heaven. If with these we fail, adieu to the business." We knew this *could not be.* Now, we answer the same question almost daily, by saying, we should expose our eggs with as certain a prospect of success as we should plant corn or potatoes, or engage in any of the common occupations of the farmer.

ABRAHAM ERISMAN, *Rapho, Lancaster co., Pa.*—I first commenced feeding this summer. I fed the peanut variety, in three small lots, and gathered 8½ bushels of cocoons. The first lot ate and wound well, as I thought, in about 33 days. About ten per cent died in their last age.

The second crop was considerably neglected in the first and second ages, and in consequence of this many died. The last lot, through the pressure of other business, were not any too well attended to, and consequently I lost twenty per cent of these.

(The sickness referred to is common in clear feeding, and the cause assigned is doubtless the true one, viz., " want of attendance."—A. C. V. E.)

ABIAL S. SMART, *Springfield, Vt.*—My family have been engaged, in a limited way, in feeding silk-worms for the last four years, and with tolerable success. There have been raised in this town the present season over 1100 pounds of cocoons, by a dozen different feeders. There are some in the business in every town adjoining us, but no market for our cocoons very near. No filature to prepare silk for market, and we are obliged to get our cocoons wrought into sewings and twist, but cannot make a cash article of it.

J. BELCHER & SONS, *Richford, Tioga co., N. Y.*—We commenced in the silk culture in 1839, when trees were high, and invested a capital of $1,000, and have since added $200 more, making $1,200. We have now about ten acres of trees, (multicaulis.) Previous to 1844 we have made about 1,900 pounds of cocoons. This year we have made 375 pounds, at an actual cost of $150, and the cocoons are not worth in market over $112. Thus, it will be seen, that the cost of raising actually exceeds the value by $38. In 1842 we made 939 from less than five acres of ground, and with less expense than we have incurred this season.

Our worms have been unhealthy this year, and we know not what to attribute it to, as we have raised them in the same place, and have treated them as well as we know how with our increased experience; and yet we have not raised more than one-fifth of our worms to maturity. They have died some at all their moultings, but particularly when they had done eating, they would lie still upon the shelves and die. Some look perfectly natural, while others turn a dark green or almost black—while a small proportion had the yellows. We used lime plentifully, but tried others without, and could see no great difference. They had the freest ventilation, both day and night.

We have been thus particular, in order to elicit information from attendants at the convention. We should also like to procure a few ounces of eggs from a perfectly healthy stock, and would thank any gentleman who has them to spare, or knows who has, to give us information where we can procure them ; as far as we can learn, all in our vicinity have had similar success, or rather failures. The business was increasing amongst us, quite a number having gone into it the present season on a respectable scale, some planting out from two to four acres of trees. I fear they will become dissatisfied unless there has been better success in other parts of the country. For ourselves, we are somewhat cast down, but not discouraged, and intend to persevere in our exertions to demonstrate that silk can be successfully raised in this as well as in other countries. We think our failure in the silk cause should be attributed to some peculiarity of the season, rather than to any defect in the climate generally.

(We cannot say what may be the true cause of this " mishap." We have seen cases apparently the same, and did not hesitate to attribute it to one or both of the following evils, viz : First, to the progress of the eggs towards the hatching point, where it was too cold to admit of their natural hatching, and not cold enough to keep them perfectly dormant. We have no doubt this is frequently the cause of disease. They should not be exposed for a moment to any atmosphere less cold than that which will preserve ice ; and care should be taken to have them placed in such an atmosphere before there is any possibility of the commencement of the incipient process.

The other evil to which we allude was that of feeding on tight surfaces ; for, however well the cocoonery may be ventilated, the worms cannot be sufficiently exposed to the air if on tight surfaces. These are suggestions which may not be applicable to this case ; but they are certainly of great weight, and entitled to an investigation by friend B. & Sons. They have been doing too well, and have induced too many others to enter upon the work, now to become disheartened and fail. A. C. V. E.)

Henry Chapin, *Newport, Sullivan co., N. H.*—Is engaged both in growing and manufacturing, and answers the questions to both.

No. of years engaged,	4
No. of acres of land employed,	2
No. of trees not known fully.	
Capital invested,	$200
Amount of cocoons prior to 1844, (lbs.)	650
Amount in 1844,	250
Cost in 1844,	$25
Value of the same,	$100
Manufacturing—number of years engaged,	3
Amount of capital invested,	$500
Amount of American stock used, (lbs.)	175
No. females employed during fall and winter,	4
Yards of vestings,	30
No. of cravats and handkerchiefs,	167
Yards ladies' dresses,	75
Total amount of goods,	$1,550

I am highly gratified in observing the noble efforts of the American Institute, in regard to the growth and manufacture of silk. Four years experience, even in this cold climate, has fully satisfied me that the silk culture is not only practicable, but can be made to repay the culturist for his labor. In 1841 I built a silk factory on a small stream, 20 feet by 30, two stories high, with a basement; it has twenty-seven windows. I hatch and feed my worms in my dwelling house until after the fourth moulting. I then remove them to my factory, which being plastered, I can more easily secure from mice, &c. Windows raised in warm weather, day and night; closed in cold nights. I think artificial heat indispensable, especially at the time of winding, if the weather is cold. I have used air-slack lime; I feed two crops of worms in a season; the first crop generally the best; I feed almost exclusively on multicaulis. Enough of good foliage, cleanliness, good air, and plenty of room, are the grand secret. My second crop this season is the best, owing, I think, to selecting the mature leaves.

Martin Phelps, *Preble, Cortland co., N. Y.*—Have been engaged in feeding three years; one-half an acre employed; 6,500 trees; $100 capital invested. Previous to 1844 raised sixty-three pounds of cocoons; in 1844, one hundred and eight pounds, at a cost of $29.50, valued at $52, including the State bounty.

The above is a detail of my operations in this cause during the last season. Last year I sold between four and five bushels at the State prison at Auburn; but now I understand they have discontinued the business there, which leaves us without a market. We need a filature and factory in central New-York, in order to make a market for our cocoons for those of us who do not understand reeling.

My operations, as you see, are on a small scale, and should the State discontinue the bounty, we should get just about enough to cover the expense of hoeing the trees, and feeding; especially if we sell for $3 or $3.50 per bushel; but I am not discouraged. I believe the information we get from your valuable reports, together with our experience, will finally prevail, and we become a great silk growing and manufacturing country.

Shaw and Weston, *Burlington*, *Vt.*—We have been engaged in the silk business three years. The quantity of land and number of trees used is uncertain, as the leaves used by us in feeding, were collected from scattered trees in many different places.

Whole capital invested in lands and permanent fixtures, ...		$400.00
Amount of cocoons in pounds, prior to 1844	740	
Amount of cocoons in pounds in 1844	470	
Cost of cocoons, ...		$118.00
Value of cocoons	$171.00	
Add State bounty of 20 cents per pound, ...	94.00	
	$265.00	

Our cocoonery and fixtures are sufficient for feeding at least four times the number of worms fed in 1844, and there should consequently, be added to the $118, only six dollars for interest on the capital invested, making the whole cost of our cocoons for this year $124. We have one acre of very flourishing multicaulis trees, principally from cuttings planted last spring, and intend to plant ten acres more next spring, with a suitable proportion of other varieties for early feeding.

In feeding the present year, we have used lime very freely, and with most satisfactory effect, our worms having been remarkably healthy. Our cocoons from worms fed without artificial heat, have averaged 194 to the pound; while those from worms hatched from the same kind of eggs, and fed in rooms kept uniformly warm by artificial heat, averaged 275 to the pound. A great part of this difference, however, was occasioned by greater attention and regularity in feeding the former lot of worms.

Alexander Smith, *Fredonia*, *Chautauque co.*, *N. Y.*—I hatched and fed about 10,000 worms, which were remarkably healthy, and made fine cocoons; I have made about twelve thousand skeins of sewings, and some twist; besides having thrown some silk for weaving.

The present aspect of the silk business in this region is just this:

There are many beginners, and as is the case in the commencement of every other new pursuit, they are the subjects of numerous difficulties, and occasional failures.

They generally expect too great profits from the means employed. Most of the cocoons are worked into sewings in the families where they are raised, and on no better machinery than the common reel and wheel, and cannot be induced to secure any thing better. If people could be induced to get good silk reels, and reel their cocoons as they should be, it would be better for all.

Many are deterred from commencing the business for want of a ready market. I purchase all I can get, but no man can fit up a filature or factory, and depend upon American cocoons for a supply; whereas if anything like an adequate supply could be obtained the whole business would go forward. But the greatest hindrance, and one which acts as a dead weight, is the unjustifiable partiality of our citizens for foreign manufactures. To accommodate this preference, much American silk is sold as Italian, and neither salesman or purchaser knows the imposition. Hence I am led to the conclusion, that unless the ladies generally can be induced to patronize the enterprise, and prefer domestic silk whenever they can get a good article, the cause must drag along heavily for many years to come. Depend upon it, female influence is the mighty lever which must put the whole machinery in operation. I have recently sent money to New-York for the purchase of raw silk, which I should gladly have expended for cocoons, but could not get them.

RICHARD SPAULDING, *Jaffrey, N. H.*—I have been experimenting some for four years. Commenced with twenty-one multicaulis trees, and have increased them to eight thousand. Last year had five pecks of cocoons, this year between four and five bushels, and might have had as many more, had we been supplied with eggs. I feed in an unfinished room in my dwelling, and use artificial heat in cold weather.

I have made me a reel after a drawing of Dale's Silk Reels, and a spinner and twister on a plan of my own. A sample of my sewing silk I enclose and send you. I am a farmer, and have no doubt the culture of silk can be made as profitable as any other branch. (The sample enclosed is certainly among the best samples received. A. C. V. E.)

JAMES HAMILTON, JR., *Bridport, Vt.*—It is six years since we commenced feeding worms. In 1839 we raised half a pound of cocoons; in 1840 four pounds, 1842 thirty-five pounds, 1843 sixty pounds, and 1844 sixty-five pounds. We commenced feeding this year the 12th of May. The first day's hatching we fed with dry foliage, as an experiment. After the first moulting we had a heavy frost which killed most of our leaves, and we were obliged, also, to feed our second day's hatching on dry leaves. The first came up pretty fair until the third moulting, when some of them died, but did much better than those fed on green leaves; they soon began to dwindle, and not more than half of them spun. We had leaves enough for twice as many as we fed, but could get no eggs. Our trees are principally multicaulis, half an acre.

Dr. M. W. PHILIPS, *Log-Hall, Edwards' Depot, Miss.*—Gentlemen, your address to silk growers reached me a short time since through due course of mail.

My situation in life makes it impracticable for me to indulge in such *luscious* fare as that to which yours would invite me—visiting your meeting. I am the loser, and no one can "calculate the value" of such a loss, but he who is too poor, and yet over anxious to indulge. I am forced to give my personal attention to my business; you will therefore please accept what little I have to offer.

I know of but one fact in support of this question, in addition to my former letter. I gave this fact to the public, through the columns of a paper devoted to agriculture and its kindred branches—the South Western Farmer—published by N. G. North, in Raymond, Miss., but will give you the particulars. The lady of my nearest neighbor, W. R. Gibbs, commenced last year to rear the silk-worm; being fond of experimenting, she resolved to try whether the trouble of feeding, fires, &c., might not be avoided.

She procured a covering to defend from rain, and birds; this was done by the aid of an old worn out umbrella, and some netting such as we use for mosquito nets; the worms were placed on a multicaulis tree and the protection placed over them. I visited them several times, and know that the worms were thus exposed to all kinds of weather, and whilst they were there we had a severe rain storm, and two exceedingly cold days—wind blowing quite keen from the southwest, yet with all this, these worms were larger, and spun their cocoons earlier than those fed in a building kept warm by means of artificial heat. The experiment of this lady proves most conclusively to my mind that worms will bear any degree of cold, that we have in our climate, during the season of feeding. We fed a few worms for the purpose of preserving eggs for future use; and as usual in an airy room, gathering our foliage in the morning while the dew was yet on them. We cleaned our frames oftener than usual, using no lime, and have been more successful than heretofore.

Of Mr. Benton's success, his letter to me will fully set forth better than I can. I send you specimens of my own silk, not prepared for the purpose of exhibition. You will make due allowance for our never having seen the operation of reeling or twisting, and have no machinery except ordinary plantation reels, a common large wheel, and a wheel used for hanking thread. We use the silk we make, for manufacturing into fishing lines, and other purposes—find it far superior to that we purchase of foreign make. Our machinery is too rude to offer in competition with your northern articles, nor do I intend it, my object being to give you something that will show the strength, and that my adopted State should be represented *badly*, rather than not at all. In my letter of last year, which you honored by thinking it worthy to be incorporated with your proceedings, (see pages 258, 201) of State edition, friend I. R. Barbour, makes a note that he thinks "Gill's tent and cradle is better" than our gin houses. I agree with him, but as our gin houses are already built, are large and airy, and as all expenditures that can be avoided, should be in new undertakings, I beg to still recommend the gin house. My house is two stories high, 62 feet long and 22 feet wide; the lower story (framed) about ten feet high, earthern floor, and not weather-boarded: the second story same size and about eight feet high, weather boarded with thin plank, windows and large doors which would render them as airy as necessary. The specimens sent you, are a few cocoons of the peanut variety; the eggs presented us as such by Miss Emma Montgomery of Oktibbeha county, Miss.; these are from W. H. Benton. A specimen of the silk from those cocoons 120 fibres to the thread as it now is, reeled and twisted by Mrs. Wm. M. Wells and my daughter, from our cocoons. A specimen of reeling, 70 fibres, reeled by Mrs. P. and her sister Mrs. S. B. Gibbes from small yellow cocoons, eggs procured originally from Mrs. Wells. A pair of mits, the work from beginning to end done by Mrs. Whitford, a lady fifty years of age, and presented to Mrs. Philips. And last a fishing line, made from our wrought silk left in the gum, thinking that the gum would keep it slightly stiff and elastic, and also less penetrable to water.

[These articles were duly received and placed in a case in the Fair, where they were seen and admired by tens of thousand of visiters. They are very fine indeed.—A. C. V. E.]

W. H. BENTON, (referred to in the above.)—Dear Sir: I received yours of the 20th inst.; you are aware that my object in feeding worms this year, was only to obtain a stock of eggs for the next, and to make such experiments, as to the manner of rearing, as would give light in regard to future operations. In the limited experiment of this year, I have not been able to arrive at any satisfactory result as regards the profit of the business. It was not to be expected; nor was it a question with me. I have considered it as already settled, that it is the best mode of remunerating labor, under certain circumstances: i. e. when the laborers are unfitted for field work. You know the kind of worms I had, the eggs being all forwarded by your kindness. There were three varieties: the light yellow, deep yellow, and white. Not having, as yet, reeled any of the cocoons, my preference for the white, is merely for its beauty and size, and most of the eggs saved, are of this variety. My worms were all mixed together upon the shelves, and I cannot, therefore, say which is the most healthy. I lost, probably, not more than 100, by disease, out of about 10,000; and that loss was, I think, occasioned by the crowded state of two or three of our shelves. My feeding was altogether from the wild mulberry, but of various kinds; one kind I found near my house, which I think far superior to the morus: leaves very large, very thin and tender, soft and flexible; the young branches have a velvet appearance, which distinguishes the tree from any other that I have seen. It however remains to be seen, whether it can be as easily propagated, for in this, I think, the great superiority of the multicaulis consists. My opinion is decidedly in favor of using cut leaves entirely, in all stages; and as I have no doubt that this opinion coincides with those of the best informed; it is not necessary to state the reaaons for it. I tried various experiments with regard to spinning. The Greek mode is to pile up mulberry branches on the shelves, crossing them in all directions, and leaving the worms to spin among them as they please, and when they please: a bad plan, for various reasons, to every one who has tried it. I tried two kinds of frames made of sawed lath; by crossing the lath, boxes were formed of an inch square. Other frames were made by placing the lath only one way, thus forming groves. This plan I found to be the best, and the frames are easier made, and answer the purpose equally well. I am sorry I cannot give more assistance in making up your report. All that I can say at present, is that my expectations are fully realized. I did not expect that this year would show me what would be the profits arising from the business; but I did expect that it would show the practicability of employing time to advantage, which would otherwise have not been wanted, for want of ability to attend to any other employment. In the spring, while the worms were hatching, and while feeding them, I was preparing in my mind an article for your paper, which I promised myself should be somewhat interesting, but concluded to defer it to another season, when further experience should render my judgment more mature. I send you some of the white cocoons: of the other, I had but few, and all the millers were suffered to come out. I think I shall next year, cross the white and the deep yellow, and produce a variety better than either.

D. Stebbins, *on mulberry paper.*—Dear Sir: In your last, was a remark respecting the mulberry paper which I sent you, as being admirably calculated for the steel pen, not being encumbered with the gorse of our common paper. Something may be attributed to the Eagle Mills in this place, owned by the Hon. Wm. Clark; his mills are celebrated for an admirable finish of paper. You invite me to attend the club without fail, and give explanations. I should not dare be questioned very close, lest I should be induced to divulge a hope, which may not be realized, of producing something which has engaged my thoughts since I last wrote you. Perhaps it would be prudent to stop here; but knowing that you would favor improvement, I will merely state that I have the impression that there may be other uses for good mulberry paper, such as I hope may be made from the fresh gathered and pure foliage of the Canton mulberry, of a peculiar quality and finish, such as is required for certain purposes, and which is imported from China. Such a quality and finish, I hope may be effected at the Eagle Mills. I have not yet disclosed my views to the proprietor. The mills have been making thorough repairs, which may defeat my project, but hope that eventually something may be made superior to the samples you now have, which was made of very impure stock, gathered the previous year, and exposed to all weathers, and fit only, as I supposed, for the uses of and convenience of silk-worms. But by your last favor, and another from Mr. Ellsworth, commissioner of patents, it appears there were some good qualities in the paper sent you, although made of the poorest stock. It has been stated by a gentleman who knows the fact, that in the India islands, and probably in China, rags are not used for making paper of any kind, especially for the objects to which I have alluded. Thus you see I am not idle in thoughts about matters and things concerning the mulberry patch.

Thomas Douglas, *Macariz, East Florida, Feb. 21st,* 1843.—Dear Sir: Although my experience in the silk culture may be of little value, yet being added to the general stock which is now being gathered up by those who feel a solicitude for this branch of agriculture, it may be of some service, especially to our Territory, in all that concerns which you take so deep an interest. I therefore proceed with pleasure to comply with a request you made before you left for Washington, to give you some information on the subject. The feeding of silk-worms began to attract attention in this region in 1838; few however, engaged in it. Mrs. D. that year fed a small number, by way of amusement, which succeeded so well that we were induced to continue it. In 1839, we fed about 10,000 worms, and although (from necessity) we kept them in a small, close and badly ventilated room, they were throughout perfectly healthy, wound off well, and made very fine cocoons, weighing about 275 to the pound. Encouraged by this, and believing that the culture might be carried on successfully here, become a valuable branch of our agriculture, and bring into requisition a large portion of our pine timbered lands, I determined to proceed with it, and in the spring of 1840 commenced the erection of a building suited to the purpose, which I have since finished. That spring I had a large crop, (or family, as the French writers would perhaps more appropriately call it,) hatch out; but owing to the want of room for them made only about 40 bushels of cocoons. This crop wound off in April. In the succeeding month of May, I brought out another small crop from some choice eggs sent me from the north, which turned out well. In June and July, I brought out another crop of about 5,000 worms; these were the second crop of the small "white, two crop worms," a very hardy and valuable variety; and although we fed them in the attic story of my new cocoonery amidst the noise and dust occasioned by the carpenters and masons who were engaged in finishing it at the time, they were exceedingly healthy and wound off well in the month of August very handsomely.

In 1841, we fed two crops of about 150,000 each, the first in March and April, and the latter, which consisted of the two crop worm, in May and June, and made about 100 bushels of cocoons. There being no ice-house in this neighborhood, we could not avail ourselves of the advantage of giving our eggs what is termed "a temporary winter," so as to cause them to hatch again that season, and were therefore compelled to forego further feeding until the ensuing spring; but during the month of March we brought out a crop of about 300,000, which worked off very handsomely in April and May, from which we made about 70 bushels of cocoons. Being too much engaged with my professional pursuits to go north to procure reelers, or the necessary apparatus for reeling, and having no knowledge of that matter ourselves, except what we have derived from our experiments, and little time to devote to it—we have most of our cocoons, say about 200 bushels, yet on hand. We have, however, with such apparatus as we could procure here, which is by no means the best, reeled off enough to ascertain that our cocoons, which I think would not suffer by a comparison with any made elsewhere, will make very fine, strong and excellent silk. To satisfy you more fully upon this point, I herewith enclose you a small sample, reeled in my family, and saved a large quantity of eggs; but notwithstanding a large portion of the latter were of the small white two crop worm above mentioned, they did not hatch out a second time—a circumstance for which I am unable to assign any reason, unless it was owing to a long continuance of hot, dry weather, which some writers on the subject say will cause that result. An ice-house having been established at St. Augustine, I, about the middle of July, placed a small quantity of my eggs, assorted, in it, in order to test the fact, whether giving them a temporary winter would cause them to hatch, and being very much pressed with business, paid no further attention to them until about the middle of September, when I took them out and spread them on a shelf in my cocoonery. In a few days they commenced hatching, and we fed them through the months of October and November; they also were healthy and wound off well. I use no artificial heat, and am satisfied from my own experience that we can always feed here eight months without it, and in favorable seasons nine months, during which time we can make four crops, provided we can manage our eggs so as to have them hatch out when we wish them to do so; and I see no reason why we may not. I am aware that different opinions are entertained on this subject. It is contended by some that retarding the hatching in the manner I have mentioned, must necessarily injure the constitution of the worms. I do not think so. Providence seems in every other respect to have adapted it to the use of man. Its want of locomotion is a remarkable instance of this adaptation; if it crawled about like other worms we could do nothing with it; and I believe it is also adapted to that use in the particular I have mentioned—an opinion to which I am led by observation and experience.

This opinion, I know, is at variance with that of some writers, and amongst them Mr. Gideon B. Smith, of Baltimore, whose opinions on all questions connected with the silk culture are entitled to great weight. He says, that "the silk-worm when left to itself, exposed to the ordinary atmosphere, hatches out in the spring exactly at the time the mulberry leaves grow—that it is therefore "an annual insect," and requires exactly twelve months to pass through all the various stages of its existence." That if, for example, a silk-worm is hatched on the first day of May, 1840, the eggs that it would produce, would naturally hatch on the first day of May, 1841. In this, I think he is mistaken; and with all due deference, there seems to be an inaccuracy between his premises, which are correct, and his conclusions, unless the mulberry leaves come out always at the same period of the year, which is by no means the case in this latitude. I never laid by any eggs from silk-worms that hatched earlier than about the 10th of February, until last year; yet, I have almost every winter had some hatch out whenever the temperature of the atmosphere was as high as 70° in the following December and January, which is often the case here: again, in consequence of cool weather at the period of the year when the worms were hatched, from which they were produced, the hatching has been retarded, indeed that is the case now—many of the worms that produced the eggs I now have on hand, were hatched on the 10th of February of last year; yet they have not hatched, owing doubtless to a backward spring, and by keeping them in a cool place. I have also retarded their hatching beyond the period of the year at which the worms that produced them were hatched, without any prejudicial effect, so far as I could discover, upon the worms.

But the Persians, it is said, possess a variety which produces eight successive crops in the year; and if I am wrong in the theory above mentioned, it will be a desideratum to introduce this species in Florida, where it will find a congenial climate.

I observe, that at a Silk Convention held last fall at Northampton, Mass., Mr. Samuel Whitmarsh, whose experience in the silk culture is well known, stated that he was satisfied that but one crop could be made in the year in New-England; and the principal reason assigned by him, why more could not be raised, was that the mulberry there would not afford suitable food a longer period than was necessary for one crop. I use the leaf of the morus multicaulis, and that affords good forage for silk worms here at least eight months, and sometimes nine, and even ten months in the year.

The advantage I anticipated for Florida from the silk culture, in relation to our pine barren lands, (as they are called,) will doubtless be realized; for although the trees raised upon those lands do not produce so large leaves as those raised on the rich hammock lands, yet they afford a better food, and the silk made by the worms fed upon them is stronger and of a finer texture. By-the-bye, I am happy to learn that the experiment of cultivating sugar upon the pine lands in the interior also succeeds well; the cane raised upon these, although not so large as those grown upon the swamp lands, contains much more saccharine matter to the gallon,—there is a great saving of labor therefore in handling and transporting it to the mill, and in grinding it. The same result as to the silk culture upon the pine lands has attended the effort in Georgia. A writer in the last "*Georgian*," speaking of the experiments made, then says, "that pine lands are suitable for the production of the qualities of silk, I now consider as determined, and the fact to be of great importance to the neighboring counties, and especially to Savannah.

"If the pine country in our rear, which has been regarded as little more than waste lands, can be made productive, and subsist a dense population, what would now seem the most visionary calculations of such a change to Savannah, and the country at large, would *fall short* of the *reality*. But I venture to predict such a change, and that whoever may live to see thirty years hence, will see "*lower country Georgia silk*, quoted in the price current of Liverpool and Havre." I certainly agree with this writer; and what will be true of Georgia, will also be true of Florida, and those who live to see that day, will also see "Florida silk" quoted in the same price currents. But while East Florida may compete with Georgia, and States farther north, in the cultivation of silk, and that too with superior advantages, she will produce several staples in the cultivation of which they cannot compete with her; amongst the more important of which, will be that of sugar; and now that the din of war has ceased, and the overflowing scourge that has so long devastated this fair portion of Florida has passed by, we may hope soon to see the country settled by an industrious, intelligent and enterprising people. There is no portion of our country (or perhaps of any other,) that affords greater inducements to the immigration of that class of people, than East Florida. I have visited almost every portion of the United States, and spent many years in the noble valley of the Mississippi, (which might, with propriety, be called the garden of the world,) while the country was thin; I can say with confidence, that I have seen no country where *industry*, *enterprise* and *economy*, usually met with a better reward, than in East Florida. A catalogue of the crops suitable to the soil and climate, and of the spontaneous vegetable productions, would embrace almost every thing found at the north, with the addition of many others of exceeding value, not found in colder latitudes; among the last, are the orange, and almost every tropical fruit; and as to the healthiness of the climate, it is too well established to need any comment. Some portions of the army, to be sure, suffered much from disease, during the late Indian hostilities; but I am told that an examination of its statistics will show that it suffered less from that cause, in Florida, in proportion to numbers, than it did on the northern and northwestern frontier, during the last war with England.

The temperature is a pleasant medium between the extremes of heat and cold. By a register of the weather, kept for two years at Charlotte Harbor, the mercury never stood, but once, as high as 90°, nor sunk, but once, as low as 50°. Further north, the extremes are somewhat greater; but at St. Augustine, the mercury seldom rises above 90°, or falls below 30°. But, to use the language of a writer in a late number of that valuable work, The Journal of the American Institute; "there are other considerations of high import to the enterprising agriculturist in favor of locating in East Florida. It has been satisfactorily proved, by the late indefatigable and much to be lamented Doctor Perine, that almost any article grown between the tropics, will flourish as well, and in some cases better, than in their native soil; and the entire catalogue of spices, and other articles for which we now make long and perilous voyages to the opposite side of the globe,—often to unhealthy climates, and always incurring vast expense,—can be grown in our own territory, and furnished at a cheaper rate, and in better order, than those obtained of the half civilized Asiatic Islanders. In addition to all which, cattle, horses and hogs, may be raised, in any numbers, upon our fine grazing lands, with little or no attention from man. Our lakes and rivers abound with fish, of the greatest variety and best quality; our woodlands with the most valuable lumber; and it requires not, as in colder regions, the labor of one-half of the year to provide for the other. When all these things are considered, in connection with the fact, that East Florida already produces three of the most valuable staples in the world,—Sea Island cotton, rice, and sugar,—it will, I think, be readily acknowledged, that few new countries, if any other, has ever offered advantages to immigrants superior to those now offered by East Florida. But I crave your pardon,—you only asked for some account of my operations in the silk culture, and I have spun you out what I fear will be deemed a tedious article.

I am, sir, yours, &c.,
THO. DOUGLAS.

Hon. DAVIS LEVY,
City of Washington, *D. C.*

I. R. BARBOUR, *Oxford*, *Mass.*—I have been engaged in the culture of silk eight years. During this period, I, as well as others, have had many difficulties to contend with. We have had every thing to learn, and many things taught us during the high noon of the mulberry speculation; we have had to unlearn many of the views and theories inculcated in French and Italian publications on the silk culture, which were thrown before the American public, which are either unnecessary, or positively unsuited to the soil and climate. At any rate, my own experience abundantly proves two or three things to be all that is essential to the successful rearing of silk worms—good eggs, ample food in a suitable state, regularly administered, ample room, ample ventilation, and entire cleanliness. It is extremely injurious to give immature leaves to worms far advanced, and equally injurious to allow the air to be confined or at all tainted. For the last two years, in order to secure a perfectly pure air, I have hatched and fed my worms in my cocoonery until the third moulting, and then removed them to my tent, open on all sides. In this way my worms have been healthy—not losing five per cent by disease—and the cocoons (Nankin peanuts,) large and firm, yielding from twenty to twenty-two ounces of reeled silk to the bushel. This year the weather was cold and dry during the last ten days of one of my crops. Several times we found the thermometer in the tent in the morning as low as 50°, and one morning as low as 47°; of course the worms were torpid and inactive, and there was a loss of time in getting them through. But this was the only loss. They came out as above stated.

When in the cocoonery, I prefer picking the leaves for my worms. When in the tent, I cut up the bushes. On this plan of tent and branch feeding, I think we can make silk at about one-half of the expense supposed to be necessary, and actually necessary, upon the old plan. In my communication to the convention last year, I spoke of my location as being in a frosty valley, and as having been for two years thrown forward late into July before I could feed. I am compelled to say that this season in like manner, has been unpropitious to me in this respect. My neighbors upon the hills were from three to four weeks in advance of me in their feeding operations. Late feeding is so hazardous that it is hardly worth while to attempt it, and therefore my crop has been again a diminished one. Hence I am led strongly to caution silk growers against planting mulberry orchards upon any localities subject to untimely frosts. Get upon the highest hills you can find. Our summers in the northern States are short at the best, and to lose one-third, and that the best third of the season, as I have done now for three years in succession, amounts to a very serious drawback. At the same time every year's experience and observation augments my confidence in the entire practicability of the silk enterprise in this country. The elementary questions upon which the business, as a permanent branch of rural industry, is based, appear to me to be definitively settled, and nothing is now wanting but the capital and enterprise of our business men to push the enterprise vigorously forward, and secure the great results aimed at.

ANNUAL REPORT

OF THE

AMERICAN INSTITUTE

OF THE

CITY OF NEW-YORK.

To the N. Y. State Agricultural Society Feb. 1846.

ALBANY:
CARROLL AND COOK, PRINTERS TO THE ASSEMBLY.
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1846.

STATE OF NEW-YORK.

No. 200.

IN ASSEMBLY,

March 31, 1846.

LETTER

From the secretary of the state Agricultural Society transmitting the annual report of the American Institute.

Hon. W. C. Crain,

Sir—I beg leave to transmit to the Hon. the Assembly, the Annual Report of the American Institute, which contains papers of great value, both to the farmer and mechanic.

I have the honor to be, sir,

Yours, &c.,

J. B. NOTT,

Sec. Ag. So.

Agricultural Rooms,
March 31*st*, 1846.

[10 times.]

REPORT

Of the committee on Agriculture.

In Assembly, *April 2d*, 1846.

Mr. Shafer, from the committee on agriculture, to whom was referred the Annual Report of the American Institute, begs leave respectfully to

REPORT:

That the document is one of great interest and utility, and therefore would ask the adoption of the following resolution:

Resolved, That the same number of this report be printed that was ordered by the Senate of the Transactions of the New-York State Agricultural Society, for the use of the Legislature and the Societies.

Mr. Speaker put the question upon the adoption of the foregoing resolution, and it was decided in the affirmative.

REPORT.

In compliance with the act of the Legislature passed May 7th, 1844, the trustees submit the following statement of their transactions with the annexed documents.

The efforts of those who have had the agency in the operations of the Institute the last year, have been marked with zeal, energy, and perseverance, steadily directed to the duties enjoined in its charter, viz: "Encouraging and promoting domestic industry in this State and the United States, in Agriculture, Commerce, Manufactures, and the Arts."

Means for effecting these objects similar in a great measure to those named in the former report, have been pursued the last year.

The daily meetings of a portion of the officers and active members of the Institute have been regularly held, to whom have been submitted for consideration important letters and communications, embracing an extensive correspondence reaching to other States, and even to distant foreign countries. Experience has shown these meetings to be eminently beneficial. The contents of these letters and communications are discussed and made subservient as far as practicable in advancing the cause of industry and improvement. Suggestions of wholesome measures for future meetings of the Institute are also debated, and matured, instead of being presented in their crude state.

Means of improvement are thus promptly, by frequent meetings, made available, which otherwise might be overlooked, forgotten, and neglected. By means of these meetings, numbers become intimately acquainted with the affairs of the Institute now grown to be very multifarious, embracing a vast variety of details; and they can from time to time before the meetings of the Institute, managers, committees, &c., give such explanations as conduce to uniformity of action, and consistency in the general measures of its administration.

The Farmer's Club of the Institute has met semi-monthly through the year—besides holding frequent adjourned meetings. They have been well attended and great spirit manifested—abstracts of the proceedings have been published, and extensively circulated. Farmers who have attended have frequently expressed their gratification in the most enthusiastic terms. When a subject has been under consideration, some accurate observing farmer brings the experience of a whole life to bear upon it—others follow, and a variety of experiments made under various circumstances applying to the same subject, with particulars of their success or failure are related, which with the scientific explanations—causes and effects are made known to the perfect satisfaction of those with whom all was mystery before. The freedom of questions and answers, enables those who desire to arrive at the exact point of information sought, and thus avoid the sacrifices of fruitless experiments, the dread of which has induced thousands to persevere in the old routine of their fathers.

Thus improvements in farming have been comparatively stationary, while the mechanic arts have progressed far beyond the most sanguine anticipations, multiplied and cheapened the comforts of our whole race, and for the purposes of commerce and social intercourse placed distant countries in proximity to each other.

The early and successful operations of this club has induced the formation of a great number of others, from which useful communications have been received. Clubs are formed in some States in every county, and arrangements are making in a neighboring county in this State for the organization of clubs in all the towns. Two have recently been formed in New-Jersey, and two on Long Island. Farmer's clubs, we believe, are destined to extend over the whole country. Scatter knowledge among the secluded husbandmen ! and break down the prejudices which have retarded their advance in improvements, and by the lights of science elevate them to a position corresponding with the intrinsic importance of their occupation. Great quantities of rare and useful seeds have been received, and distributed within the last year—more than thirty varieties at a single meeting, many of them obtained through government agents, naval officers, missionaries, travelers &c , in foreign countries. No small proportion of the most admired productions, both of the farm and garden, exhibited at the last fair, were from seeds supplied by the club. Our table has been often covered with grafts of choice fruit, which have been carefully and discreetly distributed.

There is in our country unoccupied ground sufficient for such an abundance of fine fruit as will supply our whole population, and add greatly to their health and happiness. Let the numberless clubs already formed and forming follow the example, and at their outset resolve to press its prosecution simultaneously at the proper season, and the orchards and vineyards of America will very soon be the admiration of the world.

The stated meetings of the members of the Institute have been held every month in conformity to the charter. Great unanimity has prevailed in the transactions of the meetings, and a determination to carry into effect the legitimate designs of the association. The increasing correspondence, with reports of committees on models, and machines of new inventions, and improvements submitted and discussed, have been interesting and instructive. The committee on arts and sciences, and also on manufactures, examine and report on all inventions, discoveries and improvements referred to them. The inventor, discoverer, or fabricator, has only to ask from the Institute a reference and it is granted of course. The committees are selected from the most scientific and skillful men in this part of the country; and we are not aware that in a single instance these reports have proved fallacious.

All the accounts of the Institute are submitted to meetings of the members. By the by-laws all monies received on account of the Institute are deposited with the treasurer, and they cannot be drawn out without an appropriation by the meeting, and no appropriation can be made without a statement first submitted showing the purposes for which it is wanted. All the accounts are audited by the finance committee, and vouchers required for every item. Their report is submitted to the meeting with the vouchers, and both the accounts and the vouchers are subjected to the after examination of any and all the members who desire a more minute scrutiny. Hence the charges of the misapplication of the funds of the Institute which have sometimes been made in one or two of our city newspapers, are known to be false, and excite no other sensation among the members of the Institute, than that of detestation for the reckless depravity of the calumniators.

A faculty of science has also been established under professors of high attainments within the past year, whose duty it is to give gratuitous information in the different departments of knowledge to members of the Institute, whose vocation may embrace their particular sciences, and thus the application of the mechanic arts will be rendered available to every member.

The appointments have been as follows:

JAMES RENWICK,
Professor of Mechanical Philosophy.

JAS. R. CHILTON,
Professor of Analytical Chemistry.

JAS. J. MAPES,
Professor of Natural Philosophy and Chemistry, as applicable to the Useful Arts.

PAUL P. DUGAN,
Professor of Arts of Design, as applicable to the Useful Arts.

GABRIEL FURMAN,
Professor of Geology and History.

HENRY MEIGS,
Professor of Languages.

Arrangements have also been made for a school of the arts of design. Several of our first artists have volunteered their services for this purpose. There are comparatively few proficients now in this country; the ingenuity and taste of our countrymen cannot fail to become signalized, whenever suitable opportunity is afforded them for learning these arts. Vast amounts are paid annually to foreign nations, for fabrics of various kinds, merely on account of the superior taste and skill in their designs. France abounds with schools of designs, and her trade is greatly extended in foreign countries thereby; her beautiful prints command the most extravagant prices among the fashionables of every civilized country. There are instances in which our countrymen have succeeded in the imitation of some of these goods. One-sixth of the price charged for the foreign fabric, fully compensated the manufacturers for their production.

The collection of machines, models, specimens of manufactures and the arts, for exhibition at the repository, has had many additions within the past year. There are two hundred and fifty-four machines and models displayed. Also, specimens of various manufactures of silk, iron, and wood; minerals, drawings, &c. These are exhibited free of expense to originators and owners, and are objects of attraction to those who wish to purchase or examine, in order to keep up with the continued improvements that are continually multiplying, especially in implements of husbandry, manufacturing, and mechanical labor saving inventions. They are the continued subjects of examination by our inquisitive and ingenious fellow-citizens, and their utility by these means, and the gratuitous explanations afforded by practical engineers and mechanics, always in attendance, is understood, and soon they become extensively in use, not only in this vicinity, but in distant States.

The all-pervading enterprise of our people, seizes at once on every improvement which effects the smallest abridgment of manual labor. More than twenty thousand articles were exhibited at the late fair. A record is made of the name and residence of every exhibitor. There were more than 200,000 visitors entered Niblo's Garden, the principal place of exhibition. Among the visitors, great numbers are always desirous of becoming purchasers; the delivery of the articles is, however, impracticable during the exhibition. After the fair, and during the whole year, the calls at the repository by purchasers are almost incessant, to obtain articles which attracted their attention in the exhibition rooms. By a reference to the records this information is promptly given, and the place of sale pointed out. Sales are thereby promoted to an immense amount every year. The inquiry often extends to articles exhibited many years back. If the American Institute performed no other service to the public than this, by promoting the sales and consumption of domestic articles, it would be the interest of the people to sustain it. More than one-half of the States in the Union contribute some of their best fabrics and productions, and help to carry out the fair. Through the exhibition they are made known to purchasers. Factors and agents are employed, and the amount of our city business is greatly extended, and new articles are introduced, and become permanent objects of trade and mercantile profit.

It was an early object with the Institute, to establish a library of utility, embracing political economy, statistics, practical and scientific farming, commerce, manufactures, and the arts. Every year since it was commenced, large additions have been made of books and pamphlets, rare and useful. It already possesses acknowledged intrinsic practical value beyond almost any other library; numbering about six thousand volumes. As the good to be effected by such a collection of books, depends on the number and character of the readers, the most liberal measures for their accommodation have been adopted. It has always been open for reading and reference free of all expense. In this respect it is unique, being, as far as we know, the only library in the country that is entirely free to any and all who wish to avail themselves of its privileges. Literary, scientific, and practical men in all the departments of labor and art, are continually consulting it. Room and tables are provided for authors, compilers, editors of periodicals, &c., who may daily be found in their places, pursuing their objects of reading, writing, and investigation. A large number of standard works and miscellaneous publications have been added the last year; and almost every steamboat and packet from the other side of the water, has brought more or less of books, and regularly the latest and most approved periodicals devoted to agriculture and the arts, published in England, Scotland, France, &c.; beside, new publications are received every day from corresponding members and friends of the Institute, scattered over the United States and foreign countries.

In the course of several years a variety of specimens of geology, minerals, &c., have been collected and carefully preserved, for the purpose of forming a cabinet for the entertainment and instruction of those who take an interest in this department of science as it is intimately connected with, and calculated to throw much light on agriculture, and benefit the arts.

The hope had been entertained by this Institute, on whose petition the geological survey of the State was granted, that in all justice provision would be made for perfecting their cabinet by a complete set of the many specimens which were obtained; and it is still hoped that justice, though long delayed, will eventually be done. It has, however, recently been determined to wait no longer, but to commence at once, and a room is now fitting up for the purpose of displaying such specimens as have been or may hereafter be bestowed. And further contributions from all parts of our country will be solicited.

These preparations are made in the confident hope that we shall soon be enabled to perfect our cabinet by the rich varieties which the State has the means of supplying.

The conductors of this Institute were early impressed with the importance of an annual public exhibition of the choice products of agriculture and the arts accompanied with the distribution of premiums for those adjudged most excellent, as being calculated most effectually to promote the object of the charter of the Institute. They have therefore been held every year since its organization. The effect was at once seen to be salutary, and a powerful emulation was awakened through all the ramifications of industry, and over a vast area of our country. Curiosity, a deep American feeling the pride of national independence, at the first notice filled the halls of the exhibition with admiring spectators. Three great incentives to human exertion and improvement, pride, ambition and interest were brought into action in their full potency. Continual approbation greeted the ears of the ingenious contributor, and his meritorious productions were gazetted through the country. This was not all. At the close of the exhibition more durable evidences of merit were bestowed in premiums publicly awarded in the presence of vast concourses of the people. The very first exhibition roused a spirit of competition which spread throughout our land, and has been growing more and more intense ever since. The amount of improvement which has resulted from the powerful stimulus the exhibitions have afforded for eighteen years, continually increasing in magnitude, and attended with the strong and encouraging approbation of the public, no one can measure, while all must be satisfied that our unparalleled progress has been greatly accelerated by their impulses. For the purpose of presenting some idea of the 18th annual fair and its influence in accomplishing the designs of the Legislature, and with suggestions by the managers deemed by them important, we here insert their report presented at a subsequent stated meeting of the members of the Institute. The premiums awarded to agriculture and horticulture, with the names of the fortunate competitors of the 18th fair. Also a table showing the Agricultural and Horticultural premiums for a series of years.

REPORT

Of the Managers of the 18th Annual Fair.

By the accounts herewith submitted, (see report of finances annexed,) it appears that both the reciepts and expenditures have been larger than at any previous fair.

Everything was done on the part of the managers to render this exhibition of native genius, industry and enterprise as attractive and interesting as possible. Crowds of visitors thronged the exhibition rooms from the commencement to the end of the fair. The number who paid for admission is estimated at fifty thousand, and it is believed that the free visitors amounted to four times that number. This class comprised the members of the Institute and their families, all the exhibitors and their families, delegates from other states and sister institutions, distinguished gentlemen from all parts of the union, members of the corporation, judges, charitable schools, &c.

The managers were particularly gratified at seeing among the visitors an unusually large number of strangers and residents of other cities, proving that the importance of the Institute in a national point of view is rapidly increasing and extending. The managers wish that it may always be borne in mind, that the Institute is what its name indicates, *American.* Its services and benefits are extended to all sections of the country, and every American citizen has not only the privilege, but the right to visit the Institution at any time, and avail himself of all the information which the models, records and reports of the Institute can afford, as well as to consult the library of the Institute, which is not excelled by any other in the country of equal extent.

It was justly remarked by one of the managers in an address delivered during the fair, that it would be an endless task to portray the benefits which have resulted from these yearly exhibitions.

The managers beg leave to make the following statement of private contributions to increase the premiums on stock.

From Jacob Little, Esq.,	$50 00
John Ward, Esq.,	25 00
Henry G. Stebbins, Esq.,	25 00
G. M. Patchin, Esq.,	25 00
	$125 00

This sum was divided as follows:

To Native stock,	$20 00
Improved stock,	18 00
Fat cattle,	8 00
Working oxen,	15 00
Sheep,	31 00
Horses,	18 00
Mules,	10 00
Swine,	5 00
	$125 00

The premium committee have received 84 written reports from the judges in the various departments of manufactures, agriculture and the arts.

The number of premiums awarded amounted to 745, and are estimated to cost $2,250; they consist of the following:

34	Gold medals.
35	Silver cups.
181	Silver medals.
355	Diplomas.
170	Dollars in cash.
4	Washington's Letters on Agriculture.
6	Draper's Organic Chemistry.
3	Farmer's Dictionary.
4	Downing's Landscape Gardening.
7	Colman's Agricultural Tour.
4	Prince on Fruit Trees.
11	Bridgeman's Gardeners' Assistant.

3	American Husbandry, (2 vols.)
1	American Flower Garden Directory.
2	Mrs. Loudon's Flower Garden.
5	Kenrick's American Orchardist.
6	Bridgeman's Fruit Cultivator's Manual.
4	Bridgeman's Florist's Guide.
2	Chapin's Hand Book of Plants.
4	Cultivators.
9	American Agriculturist.
4	New-York Farmer & Mechanic.
33	Transactions New- York State Agricultural Society.
12	Transactions American Institute.
4	Buist's Rose Manuel.
128	vols.

The silk premium of the Hon. Myndert Van Schaick, of one hundred dollars per annum for ten years, was given at the late fair, for specimens of home made silk of increased excellence.

Among the many articles exhibited, we had from Virginia some very splendid specimens of chrystal glass, made and cut in that State.

Of the numerous machines, we have only time to mention Billings & Harrison's machines for rotting and dressing hemp and flax; Morris' steam hoisting machine, calculated with unerring exactness to lift weighty articles at a very great saving of labor; Stillman, Allen & Co.'s beautiful steam engine, that kept in motion the machinery at the fair; many fine ploughs; a valuable machine for harvesting grain; straw and vegetable cutters; a horse rake of great value; a drill for boring rocks; a telescope of excellent quality; useful tools and instruments for every mechanical work; cloths and cotton fabrics in every variety, &c. &c.

The horticultural exhibition met with universal admiration, the whole direction of which rested with the intelligent and indefatigable Mr. Thomas Bridgeman, aided by a horticulturist of kindred spirit, Mr. Samuel Walker, of Boston, Mass.

The cattle show was held in the spacious premises corner of Twenty-third street and 5th avenue, and presented some very fine specimens of the stock of our country.

The annual ploughing and spading matches were held at Harlem, and attracted a crowd of spectators, who admired the right lines cut by the ploughmen, and the light draft of the ploughs, as tested by the dynamometer, showing that the recently improved ploughs perform better work, with a third less power, than the old fashioned ones.

The spading match was both novel and pleasing; the neatness and rapidity of the digging, showed how much can be done with that invaluable instrument of cultivation.

These exhibitions were all cheered by the fine bands of music voluntarily sent by Col. Bankhead, of the U. S. Army, and by Commodore Jones, of the U. S. ship of the line North Carolina, who always act promptly when any public service requires it.

The managers were provided by the Harlem Rail Road Company, gratuitously, with the means of transportation for all those engaged in the management of the ploughing and spading matches. Another evidence of the growing popularity of the Institute, was the promptness with which the owners of the several Broadway lines of omnibusses furnished the managers with free tickets during the exhibition.

During the fair, the annual convention of farmers, gardeners, and silk culturists was held and continued three days, at which representatives appeared from fifteen States.

The proceedings of that convention being voluminous, have not yet been received from the press.

Before concluding this report, the managers beg leave respectfully to say, that the business and operations of the American Institute are governed by a spirit which reflects great credit upon the patriotism of those who are most active in its management, as well as upon the society at large. All have the same objects in view, which are, improvement in those arts and sciences which tend to increase the independence and the strength of our glorious republic.

The routine of business, which embraces a vast amount of domestic and foreign correspondence, is managed by a very few officers, at exceedingly low compensations, and by the unpaid efforts of hundreds of our fellow-citizens, who give their time and their talents to promote the great objects of the association. The most distinguished men in science, the most skillful in mechanics, and the most practical in agriculture, have cheerfully and gratuitously brought their knowledge, ingenuity, and experience to the Institute, that they might from thence be disseminated through every portion of our favored land.

It must naturally be supposed, that an institution, toiling for the benefit of the laboring, manufacturing, and agricultural classes: pursuing the even tenor of its way unostentatiously, by never interfering or clashing with any other association, and free from all political bias or influence, would at least have the good fortune to be exempt from enemies. It is to be lamented that such is not the fact.

It has been an undeviating principle, from the commencement of the Institute, not to recognize, much less to favor, any political party. It needed no sagacity to foretell, that whenever the American Institute lost its political neutrality, the seeds of its dissolution would be sown, and its future usefulness irrevocably gone; so sensible were all the members of this fact, and so cautious and guarded have they been, that there has never been a political discussion within its walls, nor so much even as the expression of a political sentiment.

Yet, strange as it may appear, and in the face of all this, the Institute has been charged, as if with a determination to mar its usefulness, with secretly advocating political or party views. The managers repel the charge with honest indignation, and boldly challenge a refutation of the assertions they have just made.

The word *American* was not placed first in our title, without a due sense of its hallowed importance. It is our pride and boast that this lofty and honored name, has not become tarnished by partisan or sectional feelings. We invite every man in these United States, as has been already stated, without distinction of party, not only to visit our institution, and avail himself of all the information which our records, our officers, our members, or our library can afford, but to become members of the same, and thus bear witness to our neutrality.

Such an institution ought to have an influence among our citizens, and to possess their confidence and good will, and we do not hesitate to say, that, laboring honestly and faithfully as we have done, and will continue to do, in the noble cause of American independence, we shall grow, in importance and in fame, both at home and abroad, and, as we increase in usefulness, we cannot fail to advance in public favor.

Governed by such motives, and adhering to such principles, the managers hope that the time is not far distant, when our representatives at Albany will be convinced that it will be an act of patriotism to aid the American Institute in procuring ground, upon which to erect suitable buildings for its permanent accommodation.

JOHN CAMPBELL, *Chairman.*

PREMIUMS

Awarded in the Agricultural and Horticultural Department, at the 18th Annual Fair, Oct. 1845.

STALLIONS.

G. M. Patchen, Brooklyn, for the best stallion. (Cassius M. Clay.) *Silver cup*, $15, *and* $10 *added.*

Joel L. G. Smith, Smithtown, L. I., for the second best stallion. (Young Mambrino.) *Silver medal.*

G. M. Patchen, Brooklyn, for the best filly. (Narcissus.) *Silver cup*, $8.

A. O. Houghton, Rahway, N. J., for a black horse. (Young Highlander.) *Silver cup*, $8.

BROOD MARES.

G. M. Patchen, Brooklyn, for the best brood mare. (Violetah.) *Silver cup*, $15.

Peter Vorhees, New-Jersey, for the second best brood mare. (Fancy.) *Silver medal.*

MATCHED HORSES.

Lewis B. Lent, No. 36 Bowery, for the best pair of horses, (cream colored.) *Silver cup.*

Albert Emmons, Flatlands, Kings co., for the second best pair of matched horses, (bays.) *Diploma.*

MULES.

Dan Case, Camptown, N. J., for the best pair of mules. *Silver cup*, $10.

Daniel Abbot, Brooklyn, for the second best pair of mules, (white.) *Silver medal.*

David S. Mills, Newtown, L. I., for the best three pair of mules. *Silver cup*, $10.

CATTLE, (IMPROVED STOCK.)

G. M. Woolsey, Hell Gate Neck, N. Y., for the best four years' old Durham bull. (Jupiter.) *Silver cup*, $15, *and* $10 *added.*

Thomas Bell, Morrisania, N. Y., for the best two years' old Durham bull. (Marius.) *Silver cup*, $10.

Thomas Addis Emmet, Mount Vernon, N. Y., for a Durham bull. (Sir Temple.) *Silver cup*, $8.

G. M. Woolsey, Hell Gate Neck, N. Y., for a Durham bull calf. (Young Jupiter.) *Silver medal.*

William Whitney, Morristown, N. J., for a Durham bull calf. *Silver medal.*

Thomas Bell, Morrisania, N. Y., for the best Durham cow. (Carmine.) *Silver cup*, $15, *and* $10 *to be added.*

Thomas R. Clark, No. 641 Broadway, for the best Durham heifer. (Rose.) *Silver cup*, $8.

William Whitney, Morristown, N. J., for the best one year old Durham bull. (Morris.) *Silver cup*, $10.

Jacob N. Blakeslee, Watertown, Conn., for the best Devon bull. (Matchless.) *Silver cup*, $15.

Roswell L. Colt, Paterson, N. J., for the best Devon cow. (Ellen.) *Silver cup*, $15.

Jacob N. Blakeslee, Watertown, Conn., for the best Devon heifer. *Silver cup*, $8.

Roswell L. Colt, Paterson, N. J., for the best Devon bull calf. (Rover.) *Silver medal.*

Samuel Swan, Bedford, Kings co., N. Y., for the best Durham heifer calf. *Silver medal.*

NATIVE CATTLE.

Lewis G. Morris, Fordham, Westchester co., N. Y., for the best native bull, (Prince William,) two years and a half old. *Silver cup*, $15, *and* $5 *added.*

Albert Emmons, Flatlands, L. I., for the best bull, one year old and upwards. *Silver medal.*

John A. Hale, Hartford co., Conn., for a native bull. (Ole Bull, Jr.) *Silver medal.*

G. S. West, Brooklyn, L. I., for a native bull. (Native American.) *Diploma.*

Joseph Clowes, Harsimus, N. J., for the best native cow. *Silver cup*, $10, *and* $5 *added.*

George Chesterman, Harlem, N. Y., for the best native heifer. *Silver medal.*

John King, Greensburgh, Westchester co., N. Y., for a pair of twin heifers, 16 months old. *Silver medal.*

H. M. Graham, Staten Island, for the best native bull calf. *Silver medal.*

FAT CATTLE.

Benjamin Florence, Mamaroneck, N. Y., for a fat heifer. *Silver cup*, $8.

WORKING OXEN.

W. K. Townsend, New-Haven, Conn., for the best pair of working cattle. *Silver cup, and* $15 *to be added.*

Charles Hubbard, Middletown, Conn., for the second best pair of working cattle. *Silver medal, and* $10 *to be added.*

David S. Mills, Newtown, L. I, for a pair of working steers. $10.

Josiah Purdy, Westchester co., N. Y., for two pair of working cattle. $10 *to each pair.*

William P. Moss, New-York, for one pair of working oxen. $10.

SHEEP, (FINE WOOLS.)

S. W. Jewett, Weybridge, Vt., for the best Merino buck. (Fortune.) *Gold medal.*

Jacob N. Blakeslee, Watertown, Conn., for the best three Merino ewes. *Gold medal.*

N. B. Smith, Woodbury, Litchfield co., Conn., for a ewe. (Saxony and Merino.) *Silver medal.*

N. B. Smith, Woodbury, Litchfield co., Conn., for two bucks. (Saxony and Merino.) *Gold medal.*

S. W. Jewett, Weybridge, Vt., for superior Merino ewes. *Diploma.*

H. & J. Carpenter, Poughkeepsie, for a Merino buck. *Diploma.*

MIDDLE WOOLS.

J. McDonald McIntyre, Albany, for the best Southdown buck. *Silver cup*, $8, *and* $2 *added.*

Robert Bolton, Jr., Westchester co., for the best Southdown ewe. *Silver cup*, $8.

S. & J. Wait, Orange co., for the best Southdown lamb. *Silver medal.*

LONG WOOLS.

Charles Bathgate, Morrisania, Westchester co., for the best Leicester ram. *Silver cup*, $8, *and* $2 *added.*

John Brewster, English Neighborhood, N. J., for the best Leicester ewe. *Silver cup*, $8.

Nathaniel Hallock, Milton, N. Y., for the best long wool lamb. *Silver medal.*

FAT SHEEP.

Edward Hallock, Milton, Ulster co., for the best fat wether. *Silver cup*, $8; *and* $7 *added.*

SWINE.

Ryder & Montross, Sing Sing, Westchester co., N. Y., for the best boar, full blooded Lincolnshire. (Pete.) *Silver cup*, $8.

David S. Mills, Newtown, L. I., for the second best boar. *Diploma.*

Ryder & Montross, Sing Sing, Westchester co., N. Y., for the best sow, full blooded Lincolnshire. (Fanny.) *Silver cup*, $8.

Benjamin Hart, Poughkeepsie, Dutchess co., for the second best sow, Berkshire breed. *Diploma.*

Samuel Love, Fifty-third street, for the best shote. *Silver medal.*

Jonathan Nash, foot of Twenty-fifth street, for the best fat hog. *Silver medal.*

Robert McCormack, Thirty-eighth street, for a boar. *Diploma.*

H. M. Graham, Staten Island, for a Chinese sow. *Silver medal.*

POULTRY AND RABBITS.

S. T. Jones, Cedars, New-Brighton, for the best pair of turkeys. *Vol. of Trans. N. Y. State Ag. Soc.*

David S. Mills, Newtown, L. I., for the best pair of geese. *Trans. N. Y. State Ag. Soc.*

S. T. Jones, Cedars, New-Brighton, for the best Muscovy ducks. *Trans. N. Y. State Ag. Soc.*

William J. Townsend, Astoria, for a pair of fowls. *Trans. N. Y. State Ag. Soc.*

H. A. Field, New-York, for the best pair of Dorking fowls. *Trans. N. Y. State Ag. Soc.*

S. T. Jones, Cedars, New-Brighton, for the best pair of Bucks county fowls *Trans. Am. Ins.*

Abraham Cadmus, Cormac, L. I., for the best pair of Poland fowls. *Trans. N. Y. State Ag. Soc.*

S. T. Jones, Cedars, New-Brighton, for the best pair of capons. *Trans. Am. Ins.*

W. J. Townsend, Astoria, L. I., for four rabbits. *Trans. N. Y. State Ag. Soc.*

H. A. Field, New-York, for two valuable shepherd dogs. *Trans. N. Y. State Ag. Soc.*

PRODUCTS OF THE DAIRY.

H. Burrell & Co , No. 15 Front street, for the best cheese. *Silver cup.*

Robert L. Case & Co., No. 101 Front street, for the second best cheese. *Colman's European Agriculture.*

John L'Hommedieu, Goshen, N. Y., for the best specimen of butter. *Silver cup*, $8.

John W. Thompson, Goshen, Orange co., for the second best specimen of butter. *Colman's European Agriculture.*

Rufus Rockefeller, No. 152 Prince street, for a specimen of butter. *Am. Agriculturist.*

FARMS AND FIELD CROPS.

S. B. Townsend, Astoria, L. I., for a well cultivated farm. *Silver cup.*

John G. Bergen, Gowannes, N. Y., for a field of wheat, two acres. *Diploma.*

W. J. Townsend, Astoria, L. I., for an exhibition of farm products. *Diploma.*

AGRICULTURAL PRODUCTIONS.

J. Hammond Coggeshall, Lynn, Mass., for the best and greatest variety of Indian corn. *Silver medal.*

George Chesterman, Harlem, N. Y., for the best forty ears of white Indian corn. *Colman's European Agriculture.*

S. W. Jewett, Weybridge, Vt., for the best forty ears of yellow Indian corn. *Washington's Letters on Agriculture.*

Thos. Ash, Throg's Neck, for forty ears of white flint corn. *Trans. N. Y. State Ag. Soc.*

W. B. Oddie, Sneden's Landing, for forty ears of superior corn. *Trans. Am. Ins.*

W. J. Townsend, Astoria, L. I., for forty ears of white corn, and eight other varieties. *Trans. Am. Ins.*

Elijah H. Kimball, Flatlands, L. I., for the best bushel of wheat. (Bergen white.) *Silver cup*, $8.

Garret G. Bergen, Brooklyn, L. I., for a bushel of fine wheat. *Washington's Letters on Agriculture.*

R. L. Pell, Pelham, for the best bushel of rye. *Silver medal.*

W. J. Townsend, Astoria, L. I., for a bushel of superior rye. *Washington's Letters on Agriculture.*

R. L. Pell, Pelham, N. Y., for the best bushel of oats. *Silver medal.*

David S. Gould, Lloyd's Neck, for a bushel of fine oats. *Washington's Letters on Agriculture.*

J. Hammond Coggeshall, Lynn, Mass., for the best bushel of barley. *Silver medal.*

R. L. Pell, Pelham, Ulster co., N. Y., for the best bushel of buckwheat. *Colman's European Agriculture.*

W. J. Townsend, Astoria, L. I., for a fine specimen of Egyptian corn. *Vol. of the Cultivator.*

James Van Siclen, Jamaica, L. I., for a bushel of red bearded wheat. *Trans. N. Y. State Ag. Soc.*

S. B. Townsend, Newtown, L. I., for a bushel of white flint wheat. *Trans. N. Y. State Ag. Soc.*

H. W. Tibbetts, Yonkers, for a bushel of wheat. *Trans. N. Y. State Ag. Soc.*

W. B. Oddie, Sneden's Landing, for a bushel of excellent oats. *Trans. N. Y. State Ag. Soc.*

H. A. Field, New-York, for a bushel of imperial oats. *Trans. N. Y. State Ag. Soc.*

R. L. Pell, Pelham, N. Y., for the best barrel of flour. (Manufactured by Tillou & Doty, Hyde Park Mills.) *Silver medal.*

William Whitney, Rochester, N. Y., for the second best flour. James M. Hoyt & Son, agents, No. 177 Washington street. *Dip oma.*

Gurdon Avery, Waterville, Oneida co., for the best specimen of hops. *Colman's European Agriculture.*

Samuel White, Madison co., N. Y., for the second best specimen of hops. *Bridgeman's Gard. Ass't.*

Vegetable Productions.

J. C. Beekman, S. Ruth, gardener, Sixty-first street, N. Y., for the choicest assortment of culinary vegetables. *Silver medal.*

J. C. Beekman, S. Ruth, gardener, Sixty-first street, N. Y., for the best and greatest variety of vegetable roots for cattle. *Silver medal.*

John P. Haff, Bloomingdale, for fourteen varieties of culinary vegetables. *Trans. N. Y. State Ag. Soc.*

Deaf and Dumb Asylum, Garret Mead, gardener, for the best twelve blood beets. *Bridgeman's Gard. Ass't.*

Charles H. Starr, Groton, Conn , for twelve turnip sugar beets. *N. Y. Far. and Mec.*

Deaf and Dumb Asylum, Garret Mead gardener, for the best twelve mangel-wurtzel beets. *Am. Agriculturist.*

Elijah H. Kimball, Flatlands, L. I., for the six best heads of cape broccoli. *Bridgeman's Gard. Ass't.*

Christopher Allen, Staten Island, for the six best heads of cauliflower. *Draper's Organic Chemistry.*

Nicholas Wyckoff, Bushwick, L. I.; for the best twelve heads of Bergen cabbage. *Trans. N. Y. State Ag. Soc.*

Elijah H. Kimball, Flatlands, L. I., for twelve heads of excellent red cabbage. *N. Y. Far. and Mec.*

John Briell, Harsimus, N. J., for the best orange-colored carrots. *Am. Agriculturist.*

Roswell L. Colt, Paterson, N. J., for the best white carrots for cattle. *Vol. of the Cultivator.*

Francis Ravell, Harsimus, N. J., for the best white solid celery. *Bridgeman's Gard. Ass't.*

Joseph Clowes, Jersey City, for twelve fine grown roots of solid celery. *Trans. N. Y. State Ag. Soc.*

Thomas Ash, Throg's Neck, for the best six egg plants. *Chapin's Hand Book of Plants.*

W. Phelan & Sons, Fifth street, cor. Avenue A, for twelve extra fine white egg plants. *Bridgeman's Gard. Ass't.*

Elijah H. Kimball, Flatlands, L. I., for the best peck of white onions. *Bridgeman's Gard. Ass't.*

John J. Varian, Twenty-eighth street, for the best peck of yellow onions. *Am. Agriculturist.*

Roswell L. Colt, Paterson, N. J., for the best twelve parsnips for the table. *Am. Husbandry.*

Jeremiah Johnson, Brooklyn, L. I., for the best twelve parsnips for cattle. *Vol. of the Cultivator.*

W. B. Oddie, Sneden's Landing, for the best peck of seedling potatoes. *Farmer's Dictionary.*

John J. Varian, Twenty-eighth street, for the best peck of potatoes for the table. *Trans. N. Y. State Ag. Soc.*

Richard F. Carman, Fort Washington, for the best peck of potatoes for cattle. *Trans. Am. Ins.*

William Tildon, Marshfield, Mass., for a basket of fine seedling potatoes. *Trans. N. Y. State Ag. Soc.*

J. W. Wood, Bloomingdale, for a peck of superior white turnips. *Vol. of the Cultivator.*

John Snyder, Green Point, Bushwick, L. I., for a peck of extra fine long white turnips. *Bridgeman's Gard. Ass't.*

W. W. Hughes, Gowannes, L. I., for a peck of fine flat white turnips. *Am. Husbandry.*

John Brewster, English Neighborhood, for twelve Russia turnips, (new variety.) *Am. Agriculturist.*

Nicholas Wyckoff, Bushwick, L. I., for two baskets of extra fine flat turnips. *Trans. N. Y. State Ag. Soc*

James Angus, gardener to W. W. Fox, West Farms, for the best twelve roots of salsafy, or vegetable oyster. *Bridgeman's Gard. Ass't.*

Deaf and Dumb Asylum, Garret Mead, gardener, for the best peck of tomatoes. *Am. Agriculturist.*

Henry Minie, Westfield, Staten Island, for the best three cheese pumpkins. *N. Y. Far. & Mec.*

Wm. Kneeland, Harlem, for the best three cattle pumpkins. *Am. Agriculturist.*

James R. McGee, South Amboy, for an extra large pumpkin. *Vol. of the Cultivator.*

Nathaniel Fenn, Bloomingdale, for six extra fine bell pumpkins.—*Trans. N. Y. State Ag. Society.*

W. J. Townsend, Astoria, L. I. for thirteen pumpkins from one vine. *Trans. N. Y. State Ag. Soc.*

Philip Calyer, Green Point, Bushwick, for six fine bell pumpkins. *Trans. N. Y. State Ag. Soc.*

Willett Denike, Bloomingdale, for two fine Spanish pumpkins.—*Trans. N. Y. State Ag. Soc.*

R. L. Pell, M. Cunningham, gardener, Pelham, for six superior varieties of squashes. *Trans. N. Y. State Ag. Soc.*

W. J. Townsend, Astoria, L. I., for three superior squashes. *Chapin's Hand Book of Plants.*

William Deere, West Farms, for one extra large squash. *N. Y. Far. and Mec.*

Garret G. Bergen, Brooklyn, for six Bergen striped squashes.—*Trans. N. Y. State Ag. Soc.*

O. C. Denslow, Yonkers, for a bushel of extra large peppers. *Am. Agriculturist.*

FRUITS.

Roswell L. Colt, Paterson, N. J., for three varieties of superior hot house and four of hardy foreign grapes. *Silver medal.*

R. L. Pell, Pelham, N. Y., M. Cunningham, gardener, for four varieties of choice foreign, and two of superb native grapes. *Draper's Organic Chemistry.*

Thomas Noyes, Stonington, Conn., for three fine varieties of house grapes. *Downing's Landscape Gardening.*

W. A. Swain, Port Richmond, for a basket of extra fine Isabella grapes, frequently renewed. *Silver medal.*

R. T. Underhill, Croton Point, for two varieties of excellent grapes, viz: Isabella and Catawba. *Kenrick's Am. Orchardist.*

Charles M. Graham, Jr., Content, Harlem Lane, for two dishes of choice Isabella grapes. *Prince's Treatise on the Vine.*

James Ewbank, Flushing, L. I., for a branch of Isabella grapes in fruit. *Trans. N. Y. State Ag. Soc.*

E. Classen, No. 219 Delancey-street, for four varieties of excellent grapes. *Trans. N. Y. State Ag. Soc.*

C. H. Hall, Harlem, for a dish of Isabella grapes from the original vine, and a dish of seedling grapes, very choice. *Trans. N. Y. State Ag. Soc.*

William Rankin, Newark, N. J., for three varieties of native grapes and two of choice foreign. *Trans. Am. Ins.*

John Miller, Williamsburgh, L. I., for Hamburg and Isabella grapes. *Bridgeman's Fruit Cultivator's Manual.*

A. L. Sands, La Fayette Place, for two varieties of fine grapes, viz: Black Hamburg and Muscat. *Bridgeman's Fruit Cultivator's Manual.*

James Angus, West Farms, for fine specimen of Isabella and Catawba grapes. *Bridgeman's Fruit Cultivator's Manual.*

R. L. Pell, Pelham, M. Cunningham, gardener, for three varieties of excellent peaches. *Farmer's Dictionary.*

A. Coe, Newark, N. J., for fifteen fine clingstone peaches. *Kenrick's Am. Orchardist.*

William Palmer, No. 177 Franklin-street, for thirteen large late peaches. *Prince's Treatise on Fruit.*

Robert Manning, Salem, Mass , for one hundred choice varieties of autumn and winter pears. *Silver Medal.*

John M. Ives, Salem, Mass., for twenty-one superb varieties of pears of the season. *Draper's Organic Chemistry.*

Charles More, Ninety-eighth-street, for several choice varieties of pears. *Trans. N. Y. State Ag. Soc.*

William M. Cooper, Monmouth Co. N. J., for twelve excellent autumn pears, viz: St. Michael or Virgalieu. *Bridgeman's Gard. Ass't.*

John Flock, Sand-Hill, N. J., for a basket of fine winter pears. *Kenrick's Am. Orchardist.*

John Corsa, Fordham, for twelve Columbian Virgalieu pears, very fine. *Bridgeman's Fruit Cultivator's Manual.*

J. M. Ives, Salem, Mass., for fourteen choice varieties of apples. *Silver Medal.*

Robert Manning, Salem, Mass., for ten fine varieties of apples. *Colman's European Agriculture.*

R. L. Pell, Pelham, M. Cunningham, gardener, for two excellent varieties of apples. *Kenrick's Am. Orchardist.*

Obadiah Smith, Monroe, Orange Co. for six varieties of apples. *Bridgeman's Gard. Ass't.*

John Brewster, English Neighborhood, N. J., for fourteen varieties of superior apples. *Prince's Treatise on Fruits.*

Rufus Rhodes, Ulster co. for eighteen extra large ox apples. *Trans. N. Y. State Ag. Soc.*

Charles Berrian, Fordham, N. Y., for forty extra large pippin apples (Gloria mundi). *Bridgeman's Fruit Cultivator's Manual.*

A. W. Duryee, English Neighborhood. N. J., for a bushel of fine Newtown pippins. *Bridgeman's Fruit Cultivator's Manual.*

John M. Ives, Salem, Mass., for four choice varieties of plums. *Prince' Treatise on Fruits.*

James McKnight, Sand-Hill, N. J., for nineteen quinces, averaging fifteen inches in circumference. *Trans. N. Y. State. Ag. Soc.*

R. T. Underhill, Croton Point, for a bushel of extra fine apple quinces. *Bridgeman's Gard. Ass't.*

Obadiah Smith, Monroe, Orange co , for twelve extra large apple quinces. *Kenrick's Am. Orchardist.*

Sullivan Bates, Bellingham, Mass., for a box of excellent cultivated cranberries. *Am. Husbandry.*

Thomas Ash, Throg's Neck, for choice varieties of fruit, viz: apples, pears, Spanish and French chesnuts and grapes. *Farmer's Dictionary.*

Flowers.

John Noble, gardener to Dunlap & Carman, No. 635 Broadway, for a large display of dahlias, frequently renewed. *Silver cup, eight dollars.*

Wm. Kent, Clinton-street, Brooklyn, for a superb display of dahlias. *Silver Medal.*

Isaac Buchanan, Seventeenth-street, for a fine display of dahlias, frequently renewed. *Draper's Organic Chemistry.*

William Phelan & Sons, corner of Fifth-street and Avenue A, for a display of dahlias and other flowers. *Downing's Landscape Gardening.*

John Briell, Harsimus, N. J., for several varieties of choice dahlias. *Am. Flower Garden Directory.*

Francis Briell, Harsimus, N. J., for a good display of dahlias. *Mrs. Loudon's Flower Garden.*

William Reid, Murray Hill Nursery, for a fine assortment of dahlias. *Trans. Am. Ins.*

J. M. Thorburn & Co., No. 15 John-street, for twenty-five specimens of rare and choice dahlias. *Silver Medal.*

William Kent, Brooklyn, for twenty-five superexcellent seedling dahlias. *Silver Medal.*

William Kent, Brooklyn, for twenty-five choice specimens from foreign stock. *Draper's Organic Chemistry.*

J. Briell, Harsimus, N. J., for twenty-five superb specimens of dahlias. *Colman's European Agriculture.*

Elijah H. Kimball, Flatlands, Bernard Kelly, gardener, for three fine ornamental designs, frequently renewed. *Silver Medal.*

Ann Jackson, Williamsburgh, L. I., for two ornamental designs. *Trans. Am. Ins.*

J. W. Wood, Bloomingdale, for a pyramid of choice flowers, frequently renewed. *Draper's Organic Chemistry.*

Charles More, Ninety-eighth-street, for several varieties of cut flowers and plants, frequently renewed. *Downing's Landscape Gardening.*

Mrs. McFarlane, Clifton, Staten Island, for a moss basket of assorted flowers, frequently renewed. *Mrs. Loudon's Flower Garden.*

Elijah H. Kimball, Flatlands, L. I., B. Kelly, gardener, for eight bouquets of rare and select assorted flowers. *Downing's Landscape Gardening.*

Boll & Hauser, Bloomingdale, for several varieties of dahlias and roses, frequently renewed. *Trans. Am. Ins.*

Boll & Hauser, Bloomingdale, for a splendid bouquet. *Buis'ts Rose Manual.*

Samuel M. Cox, Bloomingdale, for a beautiful bouquet. *Buist's Rose Manual.*

Thomas Hogg & Sons, Seventy-first street, for several specimens of excellent dahlias. *Trans. Am. Ins.*

Isaac Walton, Broadway, for a fine display of cockscombs. *Bridgeman's Florist's Guide.*

S. Ruth, gardener to J. C. Beekman, for several fine dahlias and cockscombs. *Buist's Rose Manual.*

R. Field, Brooklyn, for some fine varieties of dahlias, frequently renewed. *Trans. Am. Ins.*

Marc & Co. Forty-fourth street, for choice specimens of flowers. *Bridgeman's Florist's Guide.*

Wm. Niblo, New-York, Frederick Ruoff, gardener, for choice specimens of flowers, frequently renewed. *Trans. Am. Ins.*

Henry Delafield, Hurl Gate, W. Armstrong, gardener, for an assortment of choice flowers. *Buist's Rose Manual.*

Thomas M. Dunn. Bloomingdale, for eighteen fine seedling dahlias. *Bridgeman's Florist's Guide.*

Dr. Bronson, Hudson, for twenty-five seedling dahlias. *Bridgeman's Florist's Guide.*

Dunlap & Carman, No. 635 Broadway, for twenty-five good specimens of dahlias. *Trans. Am. Ins.*

Deaf and Dumb. Asylum, New-York, G. Mead, gardener, for a large supply of dahlias. *Trans. Am. Ins.*

AGRICULTURAL IMPLEMENTS.

T. W. Mulford, Orange, N. J. for a farm wagon. *Gold medal.*

J. A. Taplin, Fishkill, Dutchess Co. N. Y., for a horse power and the best threshing machine. *Diploma.*

B. D. Beecher, Prospect, New-Haven Co., Conn., for one horizontal endless floor horse power. *Diploma.*

T. Burrill, Geneva, N. Y., A. B. Allen, agent, No. 187 Water-street, for the second best threshing machine. *Diploma.*

Jno. Bean, Twenty-fifth-street, for the best fanning mill. *Diploma.*

Isaac T. Grant & Co., Rensselaer Co., N. Y., for the second best fanning mill. *Diploma.*

Obed Hussey, Baltimore, Md., for a reaping machine. *Silver medal.*

Obed Hussey, Baltimore, Md., for a corn crusher. *Diploma.*

Sinclair & Co., A. B. Allen, agent, No. 187 Water-street, for the best corn-cob crusher. *Diploma.*

B. Swift, Washington, Dutchess Co., N. Y., for the second best corn-cob crusher. *Diploma.*

Joseph Jones, Camden, N. J., for a model of a seed planter. *Diploma.*

S. P. Smith, No. 93 Maiden-lane, for a patent fruit gatherer. *Diploma.*

Joseph D. Briggs, Saratoga Springs, N. Y., for a patent corn sheller. *Diploma.*

T. M. Lane, N. 680 Greenwich-street, for the model of a churn. *Diploma.*

A. B. Allen, No. 187 Water-street, for the best cultivator. *Diploma.*

Edward Townley, 124 Canal-street, for six bee hives, and three hundred pounds of honey. *Silver medal.*

Joseph C. Rich, Penfield, N. Y., for the second best bee hive. *Diploma.*

James D. Johnson, Easton, Conn., for the best straw cutter. (Sanford's invention.) *Diploma.*

Thos. B. Thorne, Fishkill Landing, for the second best straw cutter. *Diploma.*

A. Haines, Jersey City, N. J., for the best horse rake. *Diploma.*

Wm. R. Gage, Lee, Mass., for forks and hoes. *Diploma.*

J. H. Morse, Shelburne Falls, Mass., for two beautiful scythes. *Silver medal.*

T. Burrill, Geneva, N. Y., A. B. Allen, agent, 187 Water-street, for a valuable clover mill. *Diploma.*

A. B. Allen, 187 Water-street, for the greatest assortment of agricultural implements. *Silver medal.*

Billings & Harrison, St. Louis, Mo., for flax and hemp machinery, and a new process for rotting hemp. *Gold medal.*

PLOUGHS.

Aaron Hawley, Brooklyn, L. I., for the best plough, (average draught two hundred and fifty pounds.) "Bergen's Patent." *Silver cup.*

David Meyer, Newark, N. J., for the second best plough, (average draught two hundred and seventy-five pounds.) *Silver medal.*

PLOUGHING.

James Clark, Morrisania, N. Y., for the best ploughing. *Silver cup*, $8.

John Brewster, English Neighborhood, N. J., for the second best ploughing. *Silver medal.*

John Rae, Morrisania. for the third best ploughing. *Diploma.*

SPADING.

Joseph Lodge, Morrisania, N. Y., for the best spading of two hundred square feet, (time, twenty-one minutes.) *Silver cup*, $8.

Wm. P. Lodge, Morrisania, N. Y., for the second best spading of two hundred square feet, (time, eighteen minutes) *Silver medal.*

James P. Lodge, Morrisania, N. Y., for the third best spading of two hundred square feet, (time, twenty-three minutes.) *Diploma.*

SILK—RAW AND MANUFACTURED.

Raw.

A. C. Van Epps, 19 Stanton-street, for the best bushel of peanut cocoons. $10—*and the Van Schaick medal.*

J. S. Pierce, Burlington, Vt., for the best reeled silk, 50 lbs. $20—*and the Van Schaick medal.*

John M. Summy, Lancaster, Penn., for the second best cocoons and raw silk. *Silver medal.*

J. V. Richardson, 173 Spring-street, for specimens of Reeled silk. *Diploma.*

George W. Benson, Northampton, Mass., for specimens of reeled silk. *Diploma.*

Manufactured.

John W. Gill, Mount Pleasant, Ohio, for the best silk goods. $50 —*and the Van Schaick medal.*

William Hayden, corner of twenty-seventh-street and Ninth Avenue, for best sewing silk, superior dying. *Silver medal.*

Jeffrey Hutchinson, Riverhead, L. I., for the second best sewing silk, of very pure colour. *Diploma.*

A. L. Jones, Manchester, Conn., for sewing silks. *Diploma.*

Miss Ann Lecraft Manny, Beaufort, N. C., for heavy sewing silk. *Diploma.*

S. & S. Halsted, 66 Cedar-street, for superior silk coat cord. *Diploma.*

Miss Gertrude Rapp, Economy, Pa., for the best white silk pocket handkerchiefs. *Silver medal.*

STATEMENT

Showing the number of Premiums awarded to the Agricultural Department from 1835 to 1845.

Year.	Gold Medals.	Silver Cups.	Silver Medals.	Cash.	Diplomas.	Vols. of Books.
1835,......	1	....	4	....	17	....
1836,......	3	....	9	....	28	....
1837,......	2	....	15	....	39	....
1838,......	4	....	21	....	42	....
1839,......	6	13	17	....	70	....
1840,......	2	18	12	....	60	....
1841,......	6	17	31	....	71	26
1842,......	3	25	34	....	37	82
1843,......	4	26	28	....	48	93
1844,......	1	29	28	$70	46	120
1845,......	5	35	44	100	38	128
Total, ...	37	164	243	$170	496	449

The reports of the agricultural and horticultural productions of the farm and garden exhibited at Niblo's Garden, the annual ploughing, and spading matches, and farmers, gardeners, and silk culturists convention, referred to by the managers, are appended. The voluntary donations by liberal individuals to increase the premiums on cattle and other live stock, and on silk, will encourage competition. Large premiums are required to induce breeders at a distance to encounter the trouble, expense, and risk of the journey. A new subscription has been opened for the 19th annual fair under the most promising circumstances. A very considerable number of donors have already subscribed to promote the breeding of fine stock, and a gold medal is offered by the president of the Institute for the encouragement of the cultivation of flax. The increase of country visitors, particularly of substantial farmers, was a subject of frequent remark at the last fair. This change is naturally accounted for by the growing interest taken in agriculture, and the increased desire of farmers, to obtain information of the new and improved productions of the field and the garden, and the most profitable culture adopted with the new labor-saving machines, and convenient implements of husbandry shown on these occasions; where there are always present those who will explain their application and benefits. The plan of the charter, combining all the great interests of industry, is essential to an institution graduated on a scale of expenditure required by the variety and magnitude of its operations. If an amount equal to the admission fees of the exhibition, contributed by either of the great interests embraced in the charter, were withheld, the institute could not meet its expenses.

The following is a full account of all the receipts and expenditures for the last year, and subjoined is a statistical table of the receipts of the institute, the sources from which they have been derived, the separate disbursements on account of the repository, the annual fairs, and the total of each for seven years; followed by a statement of the number of premiums awarded by the institute from the year 1835 to 1845, inclusive.

RECEIPTS AND EXPENDITURES.

The receipts and expenditures of the American Institute of the city of New-York, from February, 1845, to February, 1846, have been as follows:

RECEIPTS.

To cash received from sales of tickets at the 18th fair, at Niblo's Garden,		$11,062 50
“ “ received at the cattle show,		245 03
“ “ lumber sold at the close of the exhibitions,		397 20
“ “ rents of stands in the selling saloon,		670 70
“ “ contributed by members,		1,859 70
“ “ from the Hon. M. Van Schaick, for silk premium, part of $1000,		100 00
“ “ from Jacob Little, Esq.	$50 00	
“ “ “ John Ward, Esq.	25 00	
“ “ “ H. G. Stebbins,	25 00	
“ “ “ G. M. Patchen,	25 00	
		125 00
“ “ “ Comptroller State of New-York, under act of May 5, 1841,		950 00
		$15,410 13
Balance on hand at the date of the last report, February 1, 1845,		$3,651 48
Total,		$19,061 61

EXPENDITURES.

ON ACCOUNT OF THE 18TH ANNUAL FAIR OF THE AMERICAN INSTITUTE.

By printing and publication committee.

Printing circulars, invitations, tickets, blanks, handbills, badges, and flags, ...		$265 48	
" addresses, ...		146 03	
" horticultural report,...............		34 60	
" list of premiums,................		50 62	
" proceedings of convention of farmers, gardeners, and silk culturists,...........		68 94	
Newspaper advertisements, ...		219 55	
Stationery, bill posting, ribbon and contingent expenses, ...		101 13	
			$886 35

By committee of arrangements.

Lumber and ironmongery, ...		$797 88	
Carpenters work, ...		389 36	
Clerks and assistants, ...		367 00	
Laborers, ...		186 62	
Steam power and fuel, ...		324 58	
Gas, oil, and candles, and lighting,.........		403 80	
Horticultural room expenses, ...		277 32	
Muslin for tables, flags, &c.		99 44	
Cartage, ...		14 31	
Glazing show cases, ...		46 13	
Dinners for managers detained at the fair on duty, and for guests from a distance, ...	$334 33		
Refreshments for bands from Navy Yard and Governor's Island,.....	43 93	378 26	
Petty expenses, ...		102 62	
			$3,387 32

By police committee.

Police, night-watch and door-keepers................	238 50

By finance committee.

Ticket sellers and receivers,.....................	136 00
Carried forward,....................	$4,648 17

Brought forward,		$4,648 17

By committee on room and music for anniversary address.

Rent of Tabernacle,	$75 00	
Use of platform, cartage of piano, and expenses of the agricultural address,	71 00	
Expenses of orator,	64 13	
		$210 13

Miscellaneous bills

Rent of garden and premises, at $75 per day,	$1,275 00
Fireworks,	173 60
Expenses of Mr. Walker, of Boston, one of the superintendents in the horticultural room,	25 65
Lace makers,	19 25
Expenses of delegation to Albany,	14 50

By premium committee.

Premiums, estimated at $2,250, of which has been paid :

Gold and silver for medals, and striking,	$1,049 59
Silver cups,	396 00
Cash premiums,	135 00
Engraving medals and cups,	154 25
New design for diploma, printing, and filling up,	217 58
Cases for medals,	42 75
Books,	146 48
	2,141 65
Total 18th fair,	$8,507 95

ON ACCOUNT OF THE REPOSITORY AND LIBRARY OF THE AMERICAN INSTITUTE.

Salary of superintending agent,	$1,250 00
“ clerks,	670 00
“ recording secretary,	200 00
“ messenger,	133 50
Insurance on library and fixtures,	19 00
Carpenters work, new cases, &c. for library,	76 93
Wiring doors to book-cases,	6 40
Books for library,	320 09
Carried forward,	$2,675 92

Brought forward,	$2,675 92
Subscription to Colman's Agricultural Tour,	80 00
Binding books,	22 47
" Transactions N. Y. State Agricultural Society,	52 00
Mounting maps,	7 50
Newspaper subscriptions,	82 26
Advertising,	83 80
Printing circulars, blanks, by-laws, reports, &c.	139 01
Paper and stationery,	66 28
Furniture and repairs,	46 68
Repairs of stoves,	31 25
Fuel,	31 50
Lighting, camphine, &c.	28 82
Counsel fees and costs,	110 00
Agents expenses to Albany,	34 51
Delegates expenses to Boston, &c.	8 50
Expenses of funeral of Gen. Jackson, crape, &c.	8 75
Express, freight of models and books,	9 32
Engraving duplicate medals,	1 50
Petty cash expenses—postages, cleaning, labor, repairs, &c. &c.	226 14
Total repository and library,	$3,746 21

Recapitulation.

RECEIPTS.

To cash received from Jan. 20, 1845, to Jan. 20, 1846,	$14,460 13	
" " from Comptroller State of New-York,	950 00	
	$15,410 13	
Balance on hand date of last report, February 1, 1846,	3,651 48	
		$19,061 61

EXPENDITURES.

By disbursements—balance claims 17th fair, 1844,	$295 71	
" expenses 18th fair, 1845,	8,507 95	
" " repository and library,	3,746 21	
		$12,549 87
Balance on hand, (of which $4,000 has been invested at interest at 5 per cent in the Mechanics' Banking Association,)		$6,511 74

JAMES TALLMADGE, *President.*

T. B. Wakeman, *Cor. Sec'y.*

H. Meigs, *Recording Sec'y.*

STATEMENT

Of the Receipts and Expenditures of the American Institute of the city of New-York, from 1839 *to* 1845, *for Agriculture, Commerce, Manufactures and the Arts.*

	Receipts.					*Expenditures.*		
	Repository, year ending April.	State of N. York.		Annual Fairs.	Total.	Repository, year ending April.	Annual Fairs.	Total.
1840......	$1,692 82	.....	12th, 1839	$8,831 41	$10,524 23	$3,472 91	$7,631 41	$11,104 32
1841......	1,993 86	.....	13th, 1840	6,581 25	8,575 11	3,426 25	5,128 30	8,554 55
1842......	1,622 50	$950	14th, 1841	7,050 00	9,622 50	4,239 00	5,571 31	9,810 31
1843......	1,339 64	950	15th, 1842	6,741 75	9,031 39	2,889 83	5,825 75	8,715 58
1844......	1,259 00	950	16th, 1843	8,808 80	11,017 80	4,011 32	6,247 52	10,258 84
1845......	1,590 65	950	17th, 1844	10,249 71	12,790 36	3,542 35	7,424 27	10,966 62
Feb. 1846......	1,859 70	950	18th, 1845	12,600 43	15,410 13	3,746 21	8,507 95	12,254 16
	$11,358 17	$4,750		$60,863 35	$76,971 52	$25,327 87	$46,336 51	$71,664 38

PREMIUMS

Awarded by the American Institute of the city of New-York, from 1835 *to* 1845.

Year.	Gold Medals.	Silver Cups.	Silver Medals.	Diplomas.	Cash.	Vols. of Books.
1835....	16	....	91	340	....	....
1836....	27	....	125	249	....	....
1837....	29	....	126	308	....	....
1838....	26	....	167	396	....	....
1839....	27	13	124	384	....	....
1840....	12	18	60	331	....	....
1841....	17	19	118	336	....	26
1842....	12	26	88	439	....	82
1843....	17	27	91	439	....	104
1844....	20	29	104	444	$150	120
1845....	34	35	181	356	135	131
	237	167	1275	4022	$285	463

The receipts of the repository are chiefly for membership, from the annual fairs, and voluntary donations. The increase of contributions of articles which the reports of the committees made to the managers show, are four times as great as in former years; the palpable improvement in their workmanship and quality, the increasing number of visitors both at the repository and the fairs, the number and value of the premiums, all show the American Institute is firmly established, steady and sure in its progress, uninfluenced by the vicissitudes that have shaken other institutions to their foundations. It is a favorite institution of our people, and their determined support heretofore is a guaranty that it will continue to command their unfailing patronage while it is conducted with integrity and ability.

It will be seen by the receipts and disbursements of the Institute, the last year, that more than two-thirds of the expenditures are made on account of the Annual Fair, which continues about three weeks.

This at first view, might seem extravagant, and those acquainted with the large amount of receipts, have been at a loss to know the purposes of such large expenditures. By the accounts of the last fair it appears that the whole expenditures, were $8,507,95 cents. By the same accounts, it will be seen that more than half that sum, viz :

$4,653,77, was expended for rent and fixtures, of the places of exhibition, and premiums awarded.

Niblos' Garden, the principal place of exhibition, and on account of which a great portion of the expense of rent, fixtures, &c., is incurred, is the only one in the city suitable in locality, space, and construction, to give the best effect to the display, and considering the injury to his grounds, shrubbery, plants, &c., is not deemed extravagant. Most of the amount paid him, is required to put the premises in order when the fair is over ; and whether extravagant or not, it cannot be procured at a less sum ; other places not so convenient might be obtained for a small consideration, but the public would not be satisfied, their patronage would be withheld, and the Institute would lose both its popularity, and money. The expense of printing, and light, exceeds $1400. Light is procured at the lowest possible rates, and the small amount paid for printing has provoked an attack on the Institute from two of our city papers.

The printing is not half the amount paid by some of our sister cities at their fairs. Their existence depends on extensive publicity. The account shows that the cost of three items, steam power, carpenter work, and loss on lumber, amounts to $ 1275,00. The lumber and labor are both procured as low as the market will admit.

The premiums are intended to be graduated by the amount of receipts, which are estimated near the close of the fairs, and before the awards, so as to leave only a sufficient sum in the treasury to meet the probable expenses till another fair, and a prudent provision for contingencies. If an edifice could be obtained, the premiums might be doubled.

It is designed to apply a portion of the unusually large receipts of the last year in enlarging the library, and one thousand dollars has been proposed for that purpose. A suitable plate for the diplomas executed by accomplished artists, is demanded by the character of the Institute, which will probably cost six or seven hundred dollars. The receipts from this time till the next fair, will, under ordinary circumstances, fall short of the expenditures, more especially as a large sum will be required in fitting up new rooms for the repository, a change of rooms having been required by the common council.

The whole amount paid for salaries for superintending agent, recording and corresponding secretaries, and two clerks, who devote their whole time, was last year, twenty-two hundred and fifty dollars. A compensation, which, considering the variety, and complexity of the concerns of the Institute, and the labor required, bears no proportion to the salaries of the officers of our other city institutions; some fault finding papers have complained that the charge for refreshments, was extravagant. A calculation was entered into, which showed that it was short of fifty cents per day, for each of the managers and attendants whose services were afforded without any other compensation. The services of the same men could not have been paid at five, or even ten dollars per day. The managers have used their best endeavors every year to abridge expenses, and though sometimes successful in some items, others have been increased, and the amount in the end has not been materially diminished. Expenses not anticipated occur from day to day, and no time can be spared to seek after cheap workmen.

As further means of promoting agriculture, the trustees most respectfully recommend the encouragement of the formation of farmers clubs. Their tendency will operate directly to create enquiry, examination, reading, observation, and experiments among farmers.

At least one agricultural college should be established in every state, under the patronage of the state Legislature, and encouragement given to schools in all the farming districts. One central college, with an experimental farm, should be located with as little delay as possible, in, or near the city of New-York, accessible at the cost of a few cents, to that great population and the many hundreds of thousands who visit it. An establishment so located could not fail of success. There are in the city many opulent merchants, who, strongly impressed with the disasters of trade, would gladly avail themselves of such an institution to prepare their sons for a farmers life; and secure to them and their families, competence and independence. It is believed two hundred students might be obtained from the city alone.

The opportunities and the facilities for obtaining information, for procuring seeds, plants &c., all kinds of choice live stock, and distributing them by land, and water, over the country, far exceed those of any other locality on the western continent. For the purpose of making such an establishment, the American Institute have preferred their petition to the Legislature now in session asking for an appropriation to purchase suitable grounds, and erect buildings thereon. Also to enable the conductors to carry out this and other important measures, they have preferred another petition asking to be admitted to a participation in the literature fund of this state. The petition, with the reasons at length, has been referred to the literature committee of the senate, which we believe will be found on examination, conclusive. To carry out these important objects, we respectfully solicit the coöperation, and influence of the State Agricultural society, satisfied that they will on due consideration agree with the Institute that it is time to establish one such college and experimental farm in the state ; and to insure its success, that the proposed location is the proper one.

Under the superintendence of the American Institute, with its extensive library, its repository of machines, and implements, learned professors, and men of science with their laboratories, and chemical apparatus, the practical agriculturists among its members, and those that personally communicate with it, and daily rally round, and with its extensive correspondence, such an establishment cannot fail of success. The trustees are strongly impressed with the importance of the success of the first undertaking. Other states will then readily follow the example. Accomplished teachers will come forth from these institutions, and schools will spring up in all the great farming districts of our country. In any other locality the means of success will be less efficient, and less available ; its progress will be comparatively tardy, and its usefulness more limited, because a much less number will have an opportunity to become acquainted with its advantages.

Nothing exclusive, or partial is intended to be asked for. "The greatest good to the greatest number," is the motto of the American Institute.

JAMES TALMADGE,
ADONIRAM CHANDLER,
SHEPHERD KNAPP,
WM. INGLIS,
H. MEIGS,
T. B. WAKEMAN,
EDWARD T. BACKHOUSE,
Trustees.

New-York, February 28, 1846.

PAPERS

Accompanying the Report of the Trustees.

A. Reports.—Report of the Farm of S. B. Townsend—of the committee on Fruit Flowers and Vegetables—Agricultural and Dairy productions—on the Ploughing and Spading Matches—Extracts from Reports at the 18th Fair—Reports of the Committee on Arts and Sciences on Slocum's Cotton Press, Scripture's Horse Power, and Billings and Harrison's Flax and Hemp Dressing and Rotting Machinery.

B. Communications from Contributors.—Oddie on Oat and Corn Culture—Coggeshall on Barley, Rye and Corn—Jewett on Corn—Kimball on Wheat—Bergen on Wheat—Tibbits on Wheat—Van Siclen on Potatoes—Deere on Pumpkin Squash—Fenn on Pumpkins—Mead on Ruta Baga and Blood Beets—Leland on Hop Culture—Billings on the culture of Flax and Hemp—Smith on Apples—Manning on the Pear—Ives on the Pear—Bates on Cranberry—Ewbank on Grapes—Swain on Grapes—Noyes on Grapes—Patchen on Horses—Latting on Milch Cows—Blakeslee on Stock—McIntyre on Sheep—Hallock on Sheep—Jones' Seed Planter—Haynes' Horse Rake—Thorne's Hay Straw and Corn-stalk Cutter.

C. Extracts from Communications.—On the treatment of Salt Hay and Sedge as a Manure—Analysis of Soils by Thomas Kerr—Consumption of Cattle in New-York—Marl—Culture of the Peach—Curing Meat—Roots for Stock—Insects injurious to Crops—Fences—The Tannier, a new esculent—Underhill on sowing Wheat—Land Culture—Meigs on the Disease of the Potato.

D. Premiums awarded in the Department of Manufactures and the Arts at the 18th Annual Fair, 1845.

E. PROCEEDINGS of the National Convention of Farmers and Gardeners and Silk Culturists on the 9th, 10th, and 11th, days of October, 1845.

F. OPENING ADDRESS, delivered at the 18th Annual Fair, October, 1845, by Professor J. J. Mapes.

G. AGRICULTURAL ADDRESS, delivered during the 18th Annual Fair, by the Hon. H. Meigs.

H. ADDRESS, delivered during the 18th Annual Fair, on American Progress, by H. C. Westervelt, Esq.

I. ANNIVERSARY ADDRESS, delivered before the American Institute during the 18th Annual Fair, by the Hon. T. D. Eliot, of New Bedford, Mass.

(A.)

REPORT ON THE FARM OF SAMUEL B. TOWNSEND.

To the American Institute.

Your committee, appointed to examine field crops, respectfully report,

That they have visited the farm of S. B. Townsend, of Astoria, and examined his standing crops.

They inspected a field of Virginia white flint wheat, consisting of fifteen acres, nine of which were orchard. Wheat is generally deemed to be a poor crop on Long Island. This wheat was sown the last of September, on oats fallow ; the ground was ploughed twice. After the oats came off, harrowed four times, manured with forty-five bushels of poudrette, from the New-York Poudrette Company. The soil is of a dark-colored loam, a little sand ; there was a yield of thirty bushels per acre.

The oats were Scotch imperial, procured from Dr. Field, and yielded forty bushels per acre ; there were twenty-two acres, and presented a rich and beautiful appearance standing.

There were ten acres of corn, which yielded sixty bushels per acre of shelled corn. The corn crop on the Island was generally a poor one, owing to its being an unfavorable season. This field was planted in hills, three feet apart one way, and three and an half the other. It was hoed but once, but a cultivator was kept going through it, until the corn was too large for the passage of a horse. It was manured with a compost of peat, hog manure, scrapings of the barn-yard, poudrette, and charcoal.

There were twelve acres of potatoes, which yielded only two-thirds of a crop, say two hundred bushels per acre. They were excellently cultivated, entirely free from weeds. They brought four and five shillings per bushel. This field was manured with coarse horse manure; the soil the same as the wheat field.

Your committee beg leave to express the opinion, that, considering the unfavorable season, these crops were entitled to great commendation. Mr. Townsend is advanced in years, but is constant and diligent in the cultivation of his farm, all parts of which show the result of his intelligent and industrious farming, including his garden, which was rendered highly attractive, by its fine selected flowers and vegetables.

The committee think it, as a farm, entitled to particular commendation.

All of which is respectfully submitted.

H. MEIGS,
EDWARD CLARK,
W. J. TOWNSEND,
Committee.

New-York, Oct. 3d, 1845.

REPORT

Of the committee on Flowers, Fruits, and Vegetables, and Agricultural and Dairy Productions.

In presenting this report of the eighteenth annual fair of the American Institute, your chairman, in behalf of the agricultural board, has just cause to congratulate his fellow-citizens on the steady advancement of American skill in the cultivation of the soil. The display of flowers, fruits, and vegetables, agricultural and dairy productions, has been such as to more than realize the warmest anticipations of the friends of this national association. Indeed, to every mind imbued with the spirit of patriotism, the contemplation of WHAT HAS BEEN DONE by this Institute for the interests of horticulture, especially within the last five years, must prompt the most ardent and sincere wishes for a continuance of its prosperity. As a PROOF of the unwearied zeal of its members in promoting the great and important objects designed by its originators, the following enumeration of premiums is respectfully submitted by your chairman:

Silver cups,	130
Gold medals,	30
Silver medals,	150
Agricultural and horticultural books,	450
Diplomas,	250

The value of these testimonials of merit, according to the lowest estimate, exceeds the sum of three thousand dollars. In addition to the foregoing, seven thousand dollars have been expended in the requisite arrangements for an impartial and effective display of the various productions forwarded by contributors. Does not this afford convincing evidence of the liberal encouragement given by the Institute to the claims of agriculture and horticulture? NOR IS THIS ALL. In the emphatic language of Professor Mapes, "Its services to the agriculturists are freely admitted from Maine to Georgia." From the force of its example, agricultural and horticultural associations have been established in the counties of nearly every State in the Union, and men have been induced to regard planting and sowing as the most permanent, profitable, and independent avocation. Practical works on farming and gardening have been distributed by these newly-formed societies, and an increased sale created for such manuals; in proof of which, "*The Young Gardener's Assistant*" has been in great demand throughout the far west, from its having been adopted as a suitable award to competitors, in promoting the successful cultivation of vegetables, flowers, and fruit.

With much regret your committee must here remark, that until within the last few years, the art of cultivating the earth has been by many pa ents considered a degrading pursuit. From fallacious views, they have looked upon the handling of the plough, the spade, and the rake, as not so likely to confer riches, honor, and dignity, as some other occupations. The earliest records of history, however, establish the pleasing fact, that *terra culture* has excited the sweetest and loftiest strains of the poet; that it has engaged the attention of the great and the good; and that the most profound philosophers have deemed it a study of primary importance.

The subject of horticulture comes recommended to us from the declarations of Holy Writ; for it is recorded in the second chapter of the book of Genesis, that "the Lord God planted a garden eastward in Eden, and there he put the man whom he had formed, to dress and to keep it. And out of the ground made the Lord God to grow every tree that is pleasant to the sight and good for food." And from the contents of the third chapter, we may infer that the cultivation of the fig, and other tempting fruits, was well understood.

All ancient history begins with fable and tradition, and the fabulous gardens of antiquity are connected with the religions of those times. Each order of religion has its system of creation, its heaven and its hell, and what now concerns us, each had its system of gardens.

The garden of Jewish tradition is for the use of man; that of the Eastern polytheism is appropriated to the gods; and the Mahommedan paradise is the reward held out to the good in a future state. The inhabitants of Ceylon say, that paradise was situated in their country, and Johnson informs us, that they point out the tree which bore the forbidden fruit, the *Divi Lander*, or *tabernemontana alteani-*

folia of botanists. The fruit of this tree is said to be of great beauty, and the shape gives the idea of a piece having been bitten off; it is now poisonous, though said to have been excellent before Eve ate of it.

The Egyptians, B. C. 2000, according to Sir Isaac Newton, invented the art of cultivating the soil; they possessed a great variety of fruits, and held the peach tree as sacred to Harpocrates, the god of Silence, for the reason that its fruit resembled the heart, and its leaves the human tongue. Of Jewish gardens, King Solomon's, B. C. 1500, is the principal one on record. The area of his garden was quadrangular, and contained a variety of plants, odoriferous and showy flowers, as the rose, lily of the valley, the calamus, the spikenard, saffron, and cinnamon; timber trees, as the cedar, pine, and fir; and the richest fruits, as the fig, grape, apple, and date. The agricultural productions of the Jews, at this time, were wheat, barley, rye, millet, vetches, lentils, and beans; their gardens produced cucumbers, melons, gourds, onions, garlic, anise, cumin, coriander, mustard, and various spices. Vines were raised from seed, and it appears probable they were aware of the effects of one flower being impregnated with the pollen of another; for Moses says, Deut xxii., 9, "Thou shalt not sow thy vineyard with divers seeds: lest the fruit of thy seed which thou hast sown, and the fruit of thy vineyard, be defiled."

The Persians, B. C. 500, were very fond of gardens, which Xenophon says were cultivated for the sake of beauty as well as fruit. King Cyrus, whose garden was at Sardis, conceived, disposed, and adjusted the whole himself, and planted a considerable number of trees with his own hands. According to Pliny and other Roman authors, in the gardens of limited description, the trees were arranged in straight lines and regular figures; and the margins of the walks covered with tufts of roses, violets, and other odoriferous flowering plants.

A tower was a necessary appendage to an eastern garden from the most remote era—see Isaiah, v. 2. See again, 700 years afterward, Matt., xxi., 33. Epicurus taught philosophy in a garden in the city of Athens. Lord Bacon, in his learned *Essay on Gardening*, considers gardening as rather a neglected art in Greece, and makes the following striking and philosophic remark: "That when ages grow to civility and elegance, men come to build stately sooner than to garden finely, as if gardening were the greater perfection." All writers agree in putting the fig at the head of fruit trees first cultivated, and the vine as next in order. The use of flowers for preternatural, religious, funeral, and medical purposes, like every other use, is of the remotest antiquity. Bundles of flowers covered the tables of the Greeks, and were worn during repasts, because the plants of which they consisted were supposed to possess the virtue of preserving the wearer from the fumes of wine, of refreshing the thinking faculty, imparting purity to the ideas, and promoting a disposition to cheerfulness. The first implement used in cultivating the soil, all antiquarians agree, must have been of the pick kind. In the beginning of the sixteenth century, the gardens of Peru had no other spade than a pointed stick. The Chinese implement bears the marks of the highest civilization, since it has a hilt or cross handle, and a tread for the foot, and consequently supposes the use of sandals by the operator. It is said that the browsing of a goat gave the first idea of pruning the vine, as chance, which had set fire to a rose tree, gave the first of pruning the rose. The origin of the art of grafting as yet remains a secret. It does not appear to have been known to the Persians or to the Greeks in the time of Homer or Hesiod, and was communicated to the natives of Peru and South America by the Spaniards. According to some authorities, that singular people, the Chinese, were for many centuries back acquainted with the best methods of European agriculture, and conferred high honors on successful cultivators, the tilling of the earth being considered the first of duties: even the monarch of the "Celestial Empire"

"Lays his sceptre down,
"Nor deems the task unworthy of the crown."

Moses gave useful directions to his people on the culture of the vine and the olive. "For the first three years, they are not allowed to ripen any fruit." This contributed materially to the strength of the plants, and their establishment in the soil. The horticultural skill of the Greeks appears from their writers on geoponics to have been considerable. It seems that both ringing and grafting were practised by them; an the fertilization of the fig tree was effected by the well known practice of caprification. Anatolius and Sotion direct, that when and apple tree is required to bear a larger crop than usual, a ligature should be bound tight round the stem. Of the importance of manure they were well aware, and even of sowing green crops to be buried in the soil for that purpose.

The first mention of a garden in Roman history is that of Tarquinius Superbus, B. C. 534; it abounded with flowers. The next in order of time are the gardens of Lucullus, situated on the promontory of Misenum, in the Bay of Naples. They were of great magnificence and expense, and procured for that general the epithet of the Roman Xerxes. Lucullus introduced the cherry, the peach and apricot, from the East, and thus conferred a benefit. Statues and fountains came into vogue about the commencement of the christian era. The luxury of flowers, under Augustus, was pushed to extreme folly, and Nero, it is related, spent upwards of thirty thousand pounds, $140,000, in the purchase of roses to strew the floor and decorate the walls on occasion of a supper. The Romans, according to Pliny, in the summit of their power, had nearly all the different species now under cultivation, since which time the varieties have been multiplied a hundred fold.

The commercial men of Holland, in the 13th century, were among the most eminent and wealthy of merchants, and probably imported bulbs from Constantinople to ornament their gardens, of which nearly every commercial man had one. The Horticultural Society of the Netherlands is, perhaps, one of the richest in Europe, having a capital of nearly £20,000, and possessing at Brussels one of the handsomest gardens on the continent.

The taste for gardens, in modern times, has not been less universal, nor less operative. They are frequently mentioned in the history of the earliest monkish establishments and religious houses, during the dark ages. Italy and France have been long conspicuous for their general and ostentatious horticulture. They are more celebrated for their cultivation of delicious fruits, for their ornamental and shady walks, and their various and refreshing artificial fountains of water, than for the excellence of their culinary vegetables.

Holland and Flanders were very early distinguished, as they still are, for their love of plants and flowers, in which they have probably excelled all the other people of Europe. Previous to the sixteenth century, exotics were more cultivated there than any where else, and their gardens contained a great variety of rare plants. At that early day they carried on a considerable commerce in these articles. They imported plants from the Levant and both the Indies, and exported them to England, France, and Germany. Before the time of Henry the Eighth, the London market was supplied with culinary herbs and roots from Holland. And during many reigns afterwards the English kings obtained their gardeners from that country.

The soil of Great Britain was considered unfit for the productions of horticulture till within the last century. It was always unrivalled for the freshness and beauty of its verdure. But, it has been known only within the three or four last generations to have paid great attention to the ornamental cultivation of its pleasure grounds, or the profitable produce of its kitchen and fruit gardens. Since the general introduction of forcing houses, at the beginning of the eighteenth century, her noblemen, and other men of taste and opulence, have been wonderfully successful in the finest arts of cultivation. Now there is said to be more certainty of finding pine apples, of domestic growth, in the London market, every day in the year, than there is either in Jamaica or Calcutta.

The total number of vegetables species, not indigenous in England, introduced previous to the accession of George the 4th, is said to have been 11,970; of which the first 47 were brought in before and during the reign of Henry VIII.; 533 during that of Elizabeth; 578 during the reign of the two Charleses, and Cromwell; 44 in that of James II.; 298 in that of William and Mary; 230 in that of Anne; 182 in that of George I.; 1770 in that of George II.; and 6766 in that of George III.

In 1805 a private association for Horticultural objects was commenced in London, which was incorporated by royal charter in 1809. In 1803, in Edinburgh, a Florist's Society was instituted, which in 1809 enlarged its views, and took the title of the Caledonian Horticultural Society. At Paisley, in Scotland, a Florist's Society was some time ago established, of which an eminent writer observes, that "the rearing of beautiful flowers is found to improve the taste for manufacturing elegant patterns of fancy muslin; while the Florists of Paisley have been long remarked for the peacefulness of their dispositions, and the sobriety of their manners."

The benefits of such associations are numerous, and of great importance to the human family.

They encourage profitable industry. In the vicinity of London, there are occupied as fruit and kitchen gardens, about 20,000 acres of land, of which the annual produce is sold for more than 7,000,000 dollars. Within six miles of Edinburgh, there are computed to be 2000 acres occupied in the same way, of which the annual produce is worth near 800,000 dollars. For the supply of the New-York market with vegetables, fruits, and flowers, there are cultivated several thousand acres of land, of which the aggregate annual produce is supposed to be about $1,000,000. The proportions of earth thus cultivated are far more productive than any other equal portions of land in the countries where they are situated ; and they give healthy employment to great multitudes of human beings.

In no calling may the healthful activity of the mind be more happily blended with the healthful activity of the body, than in the noble art of multiplying the treasures of the vegetable kingdom. It has been remarked by the editor of the New-York *Tribune*, that the country is greatly overstocked with lawyers, doctors, &c. and a persuasive appeal is made by him to our aspiring and capable young men to avoid the crowded avenues of those professions, and find usefulness, honor, and happiness in the shady walks of agriculture, diversified as it now is by a thousand applications of scientific truths and principles. "We have," says that writer, "thousands of young men who would have been useful and respected if Agricultural Schools had existed in their boyhood, but who are now thriftless, useless and miserable. The professions cannot afford employment for half our educated and ambitious youth : THE SOIL IS THE ONLY TRUE RESOURCE." The establishment of Agricultural Schools in different sections of the country may be regarded as one of the most favorable signs of the times. In his letter to the editor of the *Southern Planter*, Bishop Ives regards their foundation as of infinite value, "both with respect to the physical and moral advancement of the people."

Commercial speculations may enrich the merchant ; imperishable renown may be conferred on the achievements of genius, and nations gain the pinnacle of glory by military valour ; all this, however, is but "the bubble reputation," which sinks into the shade when contrasted with the operations of the plough, guided by the diligent farmer, and the skill of the gardener, in producing the sustenance indispensably requisite to human existence. In one portion of the earth the labours of the husbandman may be destroyed by mildew, storm and tempest, and the horrors of famine threaten swarming millions. With what an intensity of feeling in such a calamitous visitation, would more favored regions then be regarded. Unhappily, at this moment Europe presents such a catastrophe ! Figuratively speaking, to America she casts her imploring eyes and craves of our abundance. Thanks to an overruling Providence, her supplications will not be in vain ! Our hardy and industrious farmers have ploughed deep, and reaped prosperity in every furrow ; our horticulturists have seen their gardens and their orchards smiling in all the luxuriance of plenty ; the plough, the harrow, the spade and the rake have been managed by wise heads and willing hands, diffusing happiness at home, and, on the wings of commerce wafting it abroad.

How vitally important then, that EVERY Association, having for its object the culture of the soil, should receive the cheerful support of the People ; that its progress should be onward, unchecked by the malignity of *purblind meddlers, ever ready to dip their pens in gall.* Millions of our fellow men, in distant lands, will be rescued from the pangs of starvation by the successful results of scientific Agriculture in the United States.

To silence the tongues of gainsayers, it may here be observed that $7,246.92 cents were expended by the American Institute at their Seventeenth Annual Fair. The amount actually received at the door of Niblo's Garden was $9,678, which would pay for the entrance of 38,712 persons. To this number must be added those who either by right or by courtesy were admitted free, to wit : the members of the Institute and their families, the contributors, who were provided also with ladies' tickets, United States, State and Corporation officers, the Judges, Delegates of other Institutions, and distinguished men from other parts of the Union, Charitable Schools, &c. And to these must likewise be added the very large number who gain admittance by the transfer or loan of tickets and other deceptive modes.

Your chairman is here led to remark, that many thoughtless individuals have, on former anniversaries, gained admittance by presenting articles which were unworthy of exhibition, thus disparaging the display and crowding the rooms with unprofitable visitors. On the present occasion, however, he has deemed it his duty to reject these "unconsidered trifles," to the disappointment of many a seemingly patriotic contributor. Every article received should be distinguished by the mark of excellence, SUPERIOR CULTURE being the end and aim of this Association.

It has been the object of your chairman to render the Horticultural Department a House of Representatives to all contributors. With this view, he has attached the name of each in uniform and legible characters, to the different articles of merit sent in for competition. Having promised to give due credit, on the annals of the American Institute, to exhibitors of superior articles, the following list is subjoined, which embraces the best specimens of Flowers, Fruits, Vegetables, &c.

FLOWERS.

By W. Kent, Clinton-street, Brooklyn, about 1000 excellent blooms, including 25 specimens of superior seedling dahlias.

J. M. Thorburn & Co., No. 15 John-street, 25 rare and choice specimens of dahlia blooms; also a sago palm, *cycas revoluta*, 75 years old, and now in fruit; together with a large display of dahlias, furnished expressly for the decoration of the horticultural room.

By Messrs. Dunlap & Carman, 685 Broadway, a large display of dahlias, in varieties, containing about 1,500 blooms, also some choice cockscombs.

From Isaac Buchanan, 17th street, near 5th avenue, several choice varieties of dahlias and roses, frequently renewed.

J. Briell, Harsimus, N. J., a fine assortment of dahlia flowers, including 25 specimens of American seedlings.

William Phelan & Sons, 5th street, near avenue A, several choice specimens of dahlias, roses, and other flowers, frequently renewed.

William Reid, Murray Hill Nursery, a large supply of choice dahlias.

Francis Briell, Harsimus, N. J., a fine display of dahlias, frequently renewed.

Thomas Hogg & Sons, a fine assortment of dahlias, renewed several times.

R. Field, Brooklyn, about 50 varieties of excellent dahlias, renewed four times each week.

Garret Mead, gardener to the Deaf and Dumb Asylum, a large display of dahlias, frequently renewed.

Messrs. Boll & Hauser, Bloomingdale, several specimens of choice dahlias and roses.

C. More, eight beautiful plants, also a fine display of roses and dahlias.

Mrs. McFarlane, Clifton, Staten-Island, two beautiful moss baskets of mixed flowers.

J. W. Wood, gardener to Mr. Perit, Bloomingdale, two pyramids of choice flowers.

W. Armstrong, gardener to H. Delafield, Hurlgate, several supplies of fine flowers.

E. H. Kimball, Flatlands, L. I., Bernard Kelley, gardener, three ornamental designs of rare and beautiful flowers, also ten boquets containing several choice varieties of flowers.

Frederick Rouff, gardener to W. Niblo, a fine assortment of dahlias.

Samuel Cox, Bloomingdale, a beautiful bouquet of rare flowers.

S. Ruth, gardener to J. C. Beekman, several varieties of ornamental flowers.

Isaac Walton, 10th street, near Broadway, about eight superb coxscombs.

Messrs. Marc & Co., 44th street, several fine specimens of flowers.

Dr. Bronson, Hudson, twenty choice seedling dahlia blooms.

F. M. Dunn, Bloomingdale, eighteen fine seedling dahlias.

The following gentlemen also contributed to the decoration of the Horticultural room :

W. S. Carpenter, 468 Pearl-street, a splendid assortment of dahlias.

Ephraim Holbrook, 4th Avenue, corner of 18th street, a fine supply of dahlias.

From each of the following a basket of dahlia flowers was received :

James Depeyster, Flatbush ; C. W. Leroy, 7th street ; Charles Smith, 71 Oliver street ; Elijah H. Kimball, Flatland, L. I.

Each of the annexed furnished a boquet of flowers :

Wm. McVickar, Stapleton, R. I ; Sarah Burtis, Williamsburgh ; William V. Leggett, Bloomingdale ; Charles M. Graham, Harlem Lane ; Roswell Colt, Paterson, N. J.; also two Capuchina orange trees, in fruit, raised from cuttings put down February, 1845, by John Ehlers, Weehawken, N. J.

Fruits.

R. L. Pell, Pelham, M. Cunningham, gardener, 24 Pelham Newtown pippins, 24 lady apples, 20 heath peaches, 12 Van Zandt gooseberries, 6 varieties of grapes, raised without artificial heat, viz : black Hamburgh, St. Peter's, White Sweet Water, Flame-coloured Tokay, Isabella and Catawba.

Obadiah Smith, Ontario Co.—15 apple quinces, 6 varieties of apples, viz: Orange sweet, Sam Young, Newtown pippins, Fall pippins, R. I. Greenings, French pippins.

John M. Ives, Salem, Mass.—21 varieties of excellent pears, viz : Fondante d'Automne, Wilkinson, Dix, Fulton, Andrews, Browne Beurre, Beurre Bosc, Bezi Vaet, Vicar of Winkfield, Flemish Beauty, Petre, Heathcote, Winter Nelis, Dutchesse d'Angouleme, Red Bergemotte of Coxe, Easter Beurre, Easter Bergamotte, Napoleon, Roi de Wurtemberg, Urbaniste, Bezi de Montigny, and 14 varieties of fine apples, viz.: Minister, Lyscom, Swaar, Baldwin, Pickman pippin, President, Cann of Coxe, Hubbardston Nonsuch, Danver's Winter Sweet, Aunt Hannah, Fall Harvey, Gold Rennet of England, Rose of Sharon, Rambo or Romanite ; 4 choice varieties of plums, viz.: Blue Imperatrice, Reine Claude Violette, Yellow Damson of Downing, Coe's Late Red ; 1 peach, viz : Belle de Vittry.

Robert Manning, Salem, Mass.—100 varieties of choice pears, viz.: Long Green of Coxe, Hays, Heathcote, Capiaumont, Lincoln, Buerre Kenrick, Monsieur Le Cure, Easter Buerre, Calebasse Monstrouse, Belle et Bonne, Black Pear of Worcester. Ne Plus, Meuris, Downton, Eyewood, Bergamot Parthenay, Quilletette, Buerre Delberg, Buerre Preble, Bleeker's Meadow, Brougham, Urbaniste, Shobden Court, Flemish Beauty, Buffum, Van Mons Leon le Clerc, Whitfield, Plombgastel, Frederic of Wurtemburg, Pitpoire, Beurre d'Aremberg, Turkish Bon Chretien, Jalousie, Passe Colmar, Wilkinson, Glout Morceau, Henry 4th, Winter Nelis, Surpass Virgalieu, Prince's St. Germain, Paradise d'Automne, Capsheaf, Forme Urbaniste, Dutchess d'Angouleme, Petre, Winter Crassane, Figue de Naples, Pitt's Marie Louise, Commodore, Lewis, Fulton, Brande's St. Germain, Bouquia, Rouse Leuch, Caen d'France, Doyenne Mons, Bezy Montigny, Wurzer d'Automne, Royal d'Hiver, Hacon's Incomparable, Fondante Van Mons, Bezi de la Motte, Bon Chretien Fondante, Beurre Rose, Sullivan, Jubin, Long Green of Automne, John Dean, Jalousie de Fontenay Vendee, St. Michaels, Pound, Doyenne d'Hiver, Dondas, Josephine, Buerre Beauchamps, Althorp Crassane, Princesse d'Orange, Dix, Bergamotte Sylvange, Marie Louise, Easter Bergamot, Sieulle, Chaumontelle, Dutchess of Mars, Croft Castle, Swiss Bergamot, King Edward, Bishop's Thumb, Beurre Diel, Pope's Russet, Calabasse, Echasserie, Alpha, Locke's Beurre, Thompson's Coter, Henriette, Leon le Clerc, Navez, Brown Buerre, and 10 varieties of apples, viz: Yellow Bell-flower, Fall Harvey, Corse's Sweeting, King of the Pippins, Minister, Ribston Pippin, Lyscom, Scaber Sweeting, Rhode-Island Greening, Baldwin.

Samuel Walker, Roxbury, Mass.—Thirty-nine varieties of pears, viz.: Van Mons Leon Le Clerc, Madotte, Eyewood, Beurre Rance, Beurre Diel, Beurre Capiaumont, Brown Beurre, Bergamot (Hampden's,) Crassane Winter, Crassane Althorp, Doyenne White, Dutchesse d'Angouleme, Flemish Beauty, Fondante d'Automne, Fondante Van Mons, Glout Morceau, Louise, Bonne de Jersey, Marie Louise, Monsieur Le Cure, Napoleon, Winter Nelis, Passe Colmar, Princesse d'-Orange, St. Michael Archangel, Seckel, Urbaniste, Gros Croyant, Figue, Fig of Naples, Easter Buerre, Chaumontel, Bezy de la Motte, and 7 other varieties of pears.

Josiah Lovett, (2d) Beverly, Mass.—apples in varieties, and some extra fine specimens of the Flemish beauty pear.

J. E. Allen, Salem, Mass. pears in varieties.

B. Richardson, West Cambridge, apples in varieties.

Geo. Newhall, Dorchester, pears in varieties.

M. Sands, Lafayette Place, 2 bunches of grapes, Black Hamburg and Blue Muscat. D. H. Tripet, Catskill, a dish of fine Isabella grapes.

D. S. Gregory, Jersey City, 12 extra large quinces.

Wm. M. Cooper, Monmouth Co. N. J. 12 fine Virgalieu pears.

Nicholas Wyckoff, Bushwick, 12 large winter pears, 6 Gloria Mundi apples.

Charles M. Graham, Jr. Harlem, 1 dish of winter pears, 1 do. of choice Isabella grapes, &c.

M. Antonides, Brooklyn, a stand of Isabella grapes.

James Angus, gardener to W. W. Fox, West Farms, some fine specimens of Isabella and Catawba grapes.

W. Phelan & Sons, 5th st. Avenue, 12 large winter pears.

James Locke, Sing Sing, a dish of seedling plums.

Andrew Legget, West Washington Pl. a dish of Isabella grapes.

John S. McKnight, Bordentown, a basket of late heath cling peaches.

Charles More, 98th st. several varieties of pears.

A. G. Thompson, Monmouth Co. N. J. a basket of late heath cling peaches.

William Rankin, Newark, N. J. 5 varieties of grapes, viz.: Rose, Chasselas, Catawba, Black St. Peters, Bland's Virginia and Isabella.

Thomas Ash, Throg's Neck, a dish of Isabella grapes, and several varieties of apples. Chamontel pear, Chinquapin, Spanish and French chesnuts.

John P. Haff, Bloomingdale, 2 bunches of Sweet Water and a bunch of Isabella grapes.

Roswell Colt, Paterson, N. J. Nicholas Friche, Gardiner, 3 varieties of house grapes, Black Hamburg, Black Damascus and Royal Muscat, and 4 varieties raised without artificial heat, viz : Black Muscadine, Hamburg, St. Peters and White Muscadel.

John Brewster, English Neighborhood, 4 varieties of apples, viz.: R. I. Greening, Fall Pippin, English Tart, Vandine.

Charles Berrian, Fordham, 40 Gloria Mundi pippins.

W. A. Swain, Port Richmond, a basket of extra fine Isabella grapes.

Henry N. Mott, Centreville, N. J. a basket of heath cling peaches.

Anthony Lamb, New-York, 2 extra large peaches.

Christopher Allen, Staten Island, 18 fine late peaches.

J. S. Hoyt, Brooklyn, a dish of grapes.

John Miller, Williamsburg, some fine Isabella and Sweet Water grapes.

John S. Van Wyck, 21st street, 13 cling peaches.

James McKnight, Sands Hill, 19 quinces averaging 15 inches in circumference.

Miss Bennett, New Utrecht, a dish of autumn strawberries.

R. Mattison, North Bennington, 1 white fleshed melon.

C. Sealy, Compton Creek, a basket of barberries.

M. Maury, Broome-street, a small arbor of Isabella grapes.

James Ewbank, Flushing, a branch of Isabella grape vine in fruit.

William Smith, Jersey city, 12 pound pears.

E. Classen, 219 Delancy-street, 4 varieties of excellent grapes.

Wm. Palmer, 177 Franklin, 13 Clingstone peaches.

R. T. Underhill, Croton-Point, some fine specimens of Isabella and Catawba grapes, 1 basket of Newtown pippins, and 1 basket of fine apple quinces.

Maria A. Brown, 422 Houston-street, a basket of apples.

John Flock, Sandhill, a basket of pears.

C. B. Manchester, Providence, R. I. 8 Moor Park nectarines.

A. W. Duryee, English Neighborhood, a basket of Newtown pippins.

Warner Holt, West Bloomfield, a basket of Isabella grapes.

A. Coe, Newark, 15 Cling peaches and 4 Coe's Greening apples.

John Wood, Staten Island, a bowl of Antwerp raspberries.

Thomas Noyes, Stonington, Conn. 3 varieties of grapes, Red Frontinac, Morocco and Frontinel.

G. Roberts, New Milford, Conn. 12 fine table apples.

John Tonelly, Jr. North Bergen, 4 extra large pears, Dutchess d'Angouleme.

Sullivan Bates, Bellingham, Mass. a box of cultivated cranberries.

John Cusser, Fordham, 12 Columbian Virgalieu pears.

Rufus Rhodes, Ulster Co. 18 Ox Noble apples.

Aaron Camp, Newark, a dish of Longworth's monthly raspberries.

J. H. Tuthill, Orange Co. 12 fine apples.

Richard Shoehan, a dish of fine strawberries.

C. H. Hall, Harlem, a dish of Isabella grapes from the original vine, and a seedling variety from the Isabella.

Abraham Swift, Hart's Village, Dutchess Co. 6 apples growth of 1844.

Moses Clark, Brooklyn, 18 apples, sweet and sour in each individual fruit.

Our list of Fruit, it may be observed, embraces a description of several of the best varieties of Foreign Grapes, also two varieties of seedlings, raised without the aid of artificial heat, which proves that our climate is capable of fully maturing this delicious and valuable fruit. Like France, Italy and Spain, we shall have our "vine covered hills," and thus be rendered independent of other nations for a requisite supply of healthful and refreshing wines.

VEGETABLES.

J. C. Beekman, S. Ruth, gardener—12 fine blood beets, 6 turnip rooted ditto, 12 sugar, ditto, 12 table parsnips, 12 white carrots, 12 orange carrots, 8 artichokes, 6 egg plants, 12 cattle parsnips, 12 mangel wurtzel beets, 6 egg plants, 1 bunch of red and white Carolina potatoes, 1 bunch of white okra, 1 ditto of green, 1 ditto of asparagus beans, 2 varieties of South Carolina beans, 4 striped squashes, 4 turnip cabbages, some gherkins, 1 bunch of round turnips, 3 pumpkins, 1 bunch of peppers, 1 stand of parsley, 1 bunch of long white turnips, one bunch of long scarlet radishes, 10 tomatoes weighing 10¼ lbs, 1 bushel of rutabaga, &c.

Deaf and Dumb Asylum, Garret Mead, gardener—16 blood beets, 12 mangel wurtzel ditto, 13 egg plants, 12 orange carrots, squash peppers, 12 sugar beets, 12 white carrots, 1 peck of tomatoes, in two varieties, globe artichokes, &c.

James Angus, gardener to W. W. Fox, West Farms—One half peck of Mercer potatoes, 3 fine Lima squashes, 6 egg plants, 12 roots of celery. 12 of salsify, or vegetable oyster.

R. L. Pell, Pelham, M. Cunningham, gardener—5 superior varieties of squashes, viz; 1 nonpareil hybrid, 1 cocoanut, 1 true nonpareil, 1 hybrid between the cocoanut and cashew squash, and 2 Patagonian gourds.

Elijah H. Kimball, Flatland, B. Kelly, gardener—1 peck of white onions, 6 heads of cape brocoli, 2 choice varieties of tomatoes, 1 peck of potatoes, 1 peck of turnips, martynia parsley, 12 fine red cabbages, 12 orange carrots, and 12 fine beets.

Nicholas Wyckoff, Bushwick—12 extra large drumhead cabbages, 2 pecks of white turnips, and one half peck of tomatoes.

Moses Cunningham, Harsimus, N. J.— 1 blood beet root, 23 lbs.

Henry Minie, Westfield—3 Lima pumpkins.

Charles H. Starr, Groton, Conn.—12 sugar turnip beets.

Nathaniel Fenn, Bloomingdale—6 fine bell pumpkins.

Charles M. Graham, jun , Harlem—1 sample of yard-long asparagus beans.

James Van Siclen, Jamaica—1 peck of Mercer potatoes.

Garret G. Bergen, Brooklyn—6 Bergen's striped squashes.

Phelan & Sons, 5th street—12 fine white egg plants.

Emmeline Whittemore, 9 Mulbury street—3 Smyrna squashes.

W. J. Townsend, Astoria—13 pumpkins, raised from one seed, 1 bushel of potatoes, and 3 vegetable marrow squashes.

Thomas Ash, Throg's Neck—12 roots of Salsify, and 6 egg plants.

Jeremiah Johnson, Brooklyn—12 parsnips, and 12 blood beets.

William Kerland, Harlem—3 Lima squashes, 12 carrots, 12 beets, 1 Dutch cabbage.

John P. Haff, Bloomingdale—9 varieties of beans, and 5 varieties of radishes.

Roswell Colt, Paterson, Nicholas Friche, gardener—12 roots of white celery, 12 horn carrots, 12 large parsnips, and 12 fine white carrots.

Richard F. Carman, Fort Washington—3 squashes, 4 turnips, 12 orange carrots, 2 white beets and 1 bushel of potatoes.

John Brewster, English Neighborhood—12 mangel wurtzel beets, and 12 rutabaga turnips.

John Briell, Harsimus, 12 orange carrots, 12 roots of white solid celery, and 12 blood beets.

John Banker, Prospect Plains—53 fine large peppers.

W. W. Hughes, Gowannus—1 basket of large turnips.

James F. O'Rourke, Camptown—3 sugar beets, 3 blood ditto, 3 striped squashes, 3 mangel wurtzel beets, and 1 mammoth pumpkin.

Christopher Allen, Staten Island—12 roots of white celery, 12 roots of salsify, 12 orange carrots, and 6 cauliflowers.

John Miller, Williamsburg—3 parsnips, and 2 extra large blood beets.

Wm. B. Oddie, Sneden's landing—2 fine pumpkins, 1 bushel of early peeper seedling potatoes.

John J. Varian, 27th street—2 Smyrna squashes, and one bushel of Mercer potatoes.

Henry Stube, 28th street—1 basket of yellow onions, 2 bunches of celery, and 3 of carrots.

Willet Denike, Bloomingdale, 2 Spanish pumpkins.

J. W. Wood, Bloomingdale, gardener to Mr. Perit—6 bunches of strap-leaved turnips, and 5 varieties of choice tomatoes.

Francis Ravill, Harsimus—12 roots of fine white celery.

C. C. Bennet, New Utrecht—14 pumpkins, 1 Lima squash, and some corn.

Patrick O'Hara, Bloomingdale—1 pumpkin and 9 ears of corn.

James R. McGee, South Amboy—1 extra large cheese pumpkin.

John Snyder, Bushwick—12 orange carrots, 12 blood beets, 1 peck of long white turnips, 1 peck flat ditto, and 6 egg plants.

Philip Colier, Bushwick—6 fine bell pumpkins.

William Tilden, Marshfield, Mass.—1 basket of seedling potatoes.

Dr. Field, 1 peck of strap leaved turnips.

O. C. Denslow, Yonkers—1 bushel of extra large peppers.

Agricultural Products.

Elijah H. Kimball, Flatland, 1 bushel of Bergen wheat.

Thomas Ash, of Throgsneck, 40 ears of white indian corn.

W. B. Oddie, Sneden's landing, 1 bush. oats, and 40 ears white corn.

H. W. Tibbet's Yonkers, 1 bushel of wheat, 64 lbs.

Jeremiah Van Siclen, Jamaica, 1 bushel of red bearded wheat.

Garret G. Bergen, Brooklyn, 1 bush. of Bergen's wheat.

W. J. Townsend, Astoria, 40 ears of white flint corn, 1 bushel of Virginia white flint wheat, 1 bushel of buckwheat, 1 do of rye, 1 do of common oats, 5 ears of corn.

S. B. Townsend, Newtown, 1 bushel of Virginia white wheat, 1 do of imperial oats.

Richard F. Carman, Fort Washington, 1 bushel of rye, 1 barrel of white flint wheat.

J. Hammond, Lynn. Mass., 40 ears of white corn, 40 do of yellow, 1 bushel of barley, 1 do of rye.

David S. Gould, Lloyds' Neck, 1 bushel of oats.

George Chesterman, Harlem, 40 ears of white flint corn.

Albert G. Carll, Jerico, 1 bundle of Italian grass.

T. Bell, Piermont, 40 ears of white flint corn.

A. H. Sidell, Harlem, 12 ears white and red Oregon corn.

S. W. Jewett, Addison Co., Vt., 40 ears of Jewett corn.

Doctor Field, a bag of fine oats.

Wm. McClinchy, Yorkville, 25 ears of corn, and 6 sugar beets.

J. S. Hoyt, Brooklyn, several varieties of corn, and some roots of Sir John Sinclair beet.

Jeremiah Johnson, Brooklyn, 30 ears of white flint corn, 36 of yellow do.

Wm. Baker, Fort Washington, 12 ears of each, yellow and white corn.

M. Reynolds, Jersey City, some stalks of buckwheat.

James De Peyster, Flatbush, 2 kinds of Egyptian corn.

Amos R. Stellenwerf, Yorkville, 40 ears of yellow corn.

Jeremiah Van Winkle, North Bergen, 16 stalks of Egyptian corn.

R. L. Pell, Pelham, 1 bushel of rye, 1 do of wheat, 1 do of buckwheat, 1 do of oats, 1 barrel of superexcellent flour.

H. C. Beal & Co. No. 20 South-st., 1 barrel and one half barrel superfine flour

James M. Hoyt & Son, 17 Washington-st., 2 barrels of superior flour

PRODUCTIONS OF THE DAIRY.

H. Burrell & Co., 15 Front-street, 1 extra large cheese.

Robert L. Case & Co. 101 Front st., 5 boxes of cheese.

B. V. R. Corwin, 639 Broadway, 2 boxes of cheese.

Samuel M. Ensign, South Farms, Connecticut, 4 Cheshire cream cheeses.

J. L. Hommedieu, 189 Washington st., 2 pails of butter.

John W. Thompson, Goshen, 4 pails of butter.

Rufus Rockefeller, 152 Prince-st., 1 pail of butter.

John Wilcox, Goshen, Orange county. N. Y. 2 half tubs of butter.

HOPS.

Gurden Avery, Waterville, Oneida Co., 1 bale of hops.

Samuel White, Madison Co., 1 bale of hops.

Wm. B. & A. Miller, 59 Chrystie-st., 1 box of hops, grown by J. Leland.

J. Harvey, 59 Chrystie-st , 1 box of hops, grown by E. Boswell.

Uriah Leland, Morrisville, Madison Co., 1 bale of hops.

Bradford Walker, Ontario Co, a sample of hops on pasteboard.

Charles D. Palmer, Waterville, Oneida Co., 1 bale of hops.

In conclusion, your Chairman would respectfully remark, that dissatisfaction has been expressed by competitors in the Mechanical Arts, relative to the Premiums awarded for the promotion of Floriculture ;—a darling pursuit of the virtuous and enlightened from " time immemorial." We hope to prove that these censures have not justice for their foundation, and to convince the unprejudiced, that more *honor* than *profit* has been the portion of those who have contributed so largely to the chief attraction of the Fair. Have not our Florists, by their inimitable displays of "Nature's choicest gems," attracted to t e Horticultural Room, thousands of " virtuous wives and beautiful daughters,"—the pride and glory of our Commonwealth ? This they deem a distinguished HONOR, and a pleasing evidence of that pure and refined taste which elevates and so well befits the female character. A few words as to the PROFIT. Since the commencement of the Fair, on the 6th instant, upward of 30,000 Dahlia blooms have been exhibited; their value, in connection with the time occupied in successive renewals, cannot be computed at less than five hundred dollars a larger sum, by five times, than the cost of the premiums awarded by the Institute to the cultivators of this splendid floral gem.

By adopting the new regulation of adjudging distinct premiums for Ornamental Designs, renewed during the Fair, and appointing one day expressly for the awards on the 25 best specimens of Seedling and other choice varieties, a goodly number of amateurs assembled together in friendly communion. Monday, the 15th day of October, will be long remembered in the annals of American Floriculture. A more gorgeous display of the varieties of the Dahlia was never before witnessed on the American Continent: their glowing colors, their rich contrasts, and beautiful perfection, excited general admiration. Well did these brilliant favorites repay the well-spent hours devoted to their cultivation.

Finally, the conviction that the interests of Agriculture, Horticulture, and Floriculture, are of vital importance to the welfare of the human race, and that Associations established for encouraging improved methods of culture, may be truly designated the "collective wisdom" of the Republic, is the only apology your Chairman has to offer for enlarging on this interesting subject in the present Report.

That each member of the American Institute may energetically fulfil the patriotic duties he has undertaken, in promoting the noble objects contemplated by its founders; that the proceedings of the Association, in time to come, may continue to be dignified by the administration of "EQUAL JUSTICE TO ALL;" and that it may ever prove the firm friend of the Farmer, the Gardener, the Mechanic, and the Manufacturer, is the heartfelt wish of your Chairman,

THOMAS BRIDGEMAN.

New-York, October 25, 1845.

REPORTS

On the Ploughing and Spading Matches, Oct. 1845.

The committee appointed by the board of agriculture to superintend the plowing and spading matches, and to test the qualities of the plows and other agricultural implements presented for competition for premiums, respectfully report:

That availing themselves of the liberal offer made by Charles Henry Hall, of Harlem, with whose untiring zeal and enterprise in promoting the agricultural interests of our country the public are already well acquainted—a loamy, green sward field, containing about eight acres, was selected near the residence of that gentleman as the arena on which the contests for the prizes which had been most liberally offered by the American Institute, were to come off. The day appointed for this highly honorable strife was different from that of last year in its being, instead of stormy, a clear, glorious October day, as if Heaven had blessed with its splendid weather the humble labors of man below. No soil better adapted could have been chosen. It was composed of loamy sand and humus, and sufficiently moist to admit, under skilful hands, the most perfect overturn of the green sward.

The ground to be plowed was laid out in lots of an eighth of an acre each, staked off and numbered. Corresponding numbers were then drawn by the competitors, who severally arranged their teams and plows in the positions indicated by their respective drawn numbers. A multitude of citizens were present on the occasion, among them many farmers with their teams. Nine only however entered their names for the contest—viz., John Brewster, English Neighborhood, N. J., Joseph Clark and John Rea, of Morrisania, Joseph Morel, of Gowanus in Kings county, John Meleus, of Flushing in Queens county, John Savage of West Farms, James Cochran, of Staten-Island, M. Meyher, of the city of New-York, and Benjamin Meyher, of Newark, New-Jersey.

The conditions on which the premiums to be awarded depended were—For the best plowed lots performed within an hour without regard to quantity. Messrs Nicholas Wyckoff, James Bathgate, and Thomas Bell were appointed judges. On the signal being given, the several plow teams started off at once, and a more spirited and interesting scene than that which followed has seldom, if ever, been witnessed by your committee.

Messrs. Clark and Brewster finished their allotments in thirteen minutes, and the others came in within the hour prescribed.

SPADING MATCH.

An area of two hundred square feet was set off by lot to each competitor. In this, as in the plowing match, the quality of the work performed was to be the criterion. Judges were duly appointed, and the spading match was completed in twenty-five minutes. The Messrs. Lodge, father and sons, it will be subsequently seen, bore away the prizes. Col. Clark, chairman of your committee, personally tested by the dynamometer the draughts of the several plows which had been used in the match. [Vide list of premiums, &c. annexed.]

After the performance of the matches, appropriate addresses were made on the field by Mr. Crane of Virginia, and by Mr. Meigs, secretary of the Farmers' Club of the Institute. During the day nothing occurred to mar the pleasure of the occasion. Like displays should be encouraged throughout our land—they tend to awaken a most noble ambition and to extend knowledge of the ways and means of the greatest art, that of agriculture.

PREMIUMS.

Plowing.

1st. James Clark for best plowing, a silver cup, value *eight dollars.*
2d. John Brewster, of English Neighborhood, *silver medal.*
3d. John Rea, of Morrisania, *diploma.*

Spading Match.

Joseph Lodge, aged 45 years; time 21 minutes, silver cup, value *eight dollars.*

William R. Lodge, aged 21 years; time 18 minutes, *silver medal*

Joseph P. Lodge, aged 23 years; time 23 minutes, *diploma.*

Test by dynamometer.

To Mr. Hawley, two Bergen plows, of the average draught of 250 pounds each, first premium. *Silver cup.*

To David Meyer, of Newark, New-Jersey, one plow, average draught 275 pounds, second premium. *Silver medal.*

The chairman acknowledges the active aid of Henry Meigs of the Institute, in the pleasing work of this delightful day, and of the highly useful aid of Mr. Veeder, of the board of agriculture.

Respectfully submitted.

(Signed) EDWARD CLARK, *Ch'n.*

EXTRACTS

From reports of judges of the 18th annual fair.

The reports of the judges selected to examine the many important specimens of American skill and ingenuity exhibited, (extracts from some of which are given,) furnish satisfactory evidence that our manufacturers and mechanics are each year making manifest improvement in the various branches of domestic industry where they have not as yet gone far ahead of all foreign competitors.

The judges on lamps and chandeliers in the conclusion of their report remark, " that though the present exhibition of lamps and chandeliers is less extensive than last year, yet in point of quality the articles exhibited are most creditable to their several makers, and is calculated to inspire the confident belief that at no distant day our manufacturers in this line will fully equal those of any country whatever."

The judges on glass ware in alluding to some beautiful specimens of cut glass manufactured at Wheeling, Va., among which was a magnificent vase weighing over 240 pounds, that during the exhibition elicited universal admiration, say, " that for shape and cutting they far exceed any exhibited, while the very splendid vase is the largest and most superior ever made in this country."

The judges on bonnets, speaking of the excelsior bonnets, remark as follows : " This is a new article made in this city, entirely of raw silk, and is unsurpassed for beauty and durability by any article in the bonnet line ever got up in this country or imported, that we have ever seen. There has been a decided improvement in the Neapolitan bonnets since the last exhibition, and it is well known that for durability and lightness they are much esteemed."

The judges on manufactured silk say, " we regret not finding a greater variety of manufactured silk goods for competition, arising, no doubt, from the great outlay necessary in the cost of the most approved machinery, and the difficulty of competing with the low price of labor and capital employed in Europe, consequently we may expect for some time to come, that our progress will be slow, but our course onward is sure and certain. Though for a time the producers of the raw material may turn their attention to it and twisted silks, but we trust, under the fostering hand of wise government and of the friends of protection, the time is not far distant when we shall see a proportionate degree of life and animation in the silk, as in the great staple article of the country, *cotton*."

The judges on mathematical and philosophical instruments, alluding to a refractory telescope with a six inch object glass, made of American flint glass, say, "We have examined the above named instrument, and considering that it is the first attempt in this country to construct a telescope of large size, think it worthy of the highest praise.

"The achromatism of the telescope is very nearly perfect, the secondary colors only being visible, and they but faintly, and the figure of the glass is so nearly true that that the spherical aberration is very small.

"With a power of sixty diameters, the telescope without difficulty divides the North Star, and shows clearly the flatening at the poles of Jupiter. It is also said to define the double ring of Saturn, but your committee themselves have not as yet been able to see that body under such circumstances as to render the doubling of Saturn's ring perceptible. When examining Saturn no colors were visible."

The judges on castings remark :. That it is gratifyingg to observe the rapid stride our country is making in the manufacture of iron. In 1842, we stood second on the list of the world, and are fast progressing to the first.

In 1789 George Clinton, first Governor of the State of New-York after the Revolution, with a number of patriotic gentlemen, established the first iron foundry in this city ; at that time seldom more than half a ton was melted. At this time probably 70 to 80 tons are daily melted and one foundry in Albany employs from 80 to 100 moulders and melts about 16 tons per day into stove castings.

The progress of brass castings is shewn by the specimens of bells exhibited; and in the wrought iron department, shafts for the largest steamers are made with the greatest facility at about one-third of the price they cost five years ago.

REPORTS

Of the committee of Arts and Sciences.

The committee on arts and sciences of the American Institute, to whom was referred Mr. Joseph Slocum's Patent Toggle Joint Cotton Press, beg leave respectfully to report:

That they have examined the model prepared by Mr. Slocum, and find it to be an arrangement of toggle joints so constructed as to resolve their forces in a lengthwise strain on timbers laid horizontally—that the points of first application of power are anchored to these horizontal timbers in their centres, and that the head piece so arranged is not so likely to be broken as by the usual mode of head and foot piece in toggle presses of vertical construction.

From the peculiar arrangement proposed, a press calculated to compress a large number of bales at one time, can be built at less expense than by any other plan previously exhibited to your committee.

By order of the committee,

(Signed.) JAMES RENWICK,
Chairman.

SCRIPTURE'S HORSE POWER.

The committee to whom was delegated the duty of examining and reporting on Mr. Eliphalet S. Scripture's new arrangement, for applying horse power to move machinery, beg leave to state: That on going to the place where the machine was in operation, they found a horizontal horse wheel on a vertical shaft in the usual manner, but instead of being fitted on the edge or face with cogs, or teeth in the ordinary way, the wheel is so made, that either or both of the faces and the edge may be fitted with a deep groove, each edge of the groove in the material so formed as to produce a bruncated semi-cycloidal face inwards, while above, below, or at the edge of the horse wheel, there are shafts placed, which, when horizontal, have their gudgeons in levers, set with the fixed fulcrums a short distance from the gudgeons, and the longer arms weighted so as to allow a vibratory motion in the shafts and gudgeons, and on the shafts thus fitted, Mr. Scripture has fixed what your committee think may be termed "blank pinions," formed as follows:—

A disk of metal is cast convex externally and concave internally, forming an open shell, whose edges are made sectionally, nearly in the same shape as the grooves in the horse wheel, but a little thicker near the edges of the grooves; and just outside this part, an annular groove receives a cover plate, a hole of the proper size, through both parts, enables the workmen to wedge or key them on the shaft, so that the thickest part of each pinion shall run in and fit tight on the edges of the groove in the horse wheel, which, when put in motion, carries the pinions and shafts with it, by the adhesion of the parts in contact. In situations where metal "blank pinions" cannot be obtained, wood, put in the same shape, will answer the same purpose so long as they will stand the work. Your committee agree, that the value of this arrangement lies in the following points:

First. The facility with which the most ordinary workman can construct such a machine, in any place where he can get the wood and tools; as the whole may be keyed and pinned together with wood, and made with wood gudgeons, where iron cannot be had, and from the way in which the shafts are held, in vibratory levers, if the horse wheel, from haste, shrinkage, warping, or hard work, "*gets out of truth,*" the shafts and levers will so accommodate themselves to any undulatory motion in the wheel, that the work required can still be progressed with.

Second. A well made wheel and pinions will last many years without repairs, and if the wheel grooves get worn wider, a packing placed between the annular ring and cover plate of the pinions, will spread the pinion, to fill out the worn space, and make the parts effective again.

Third. The advantage your committee considers the most important, is a greater security from injury by accident or design than they have seen in any machine of equal power; for, if the levers and weights are properly adjusted, any strain exceeding the strength of the parts, which would break a wheel fitted in the ordinary manner, and cause loss, and probably personal injury to some one, will be here evaded by the pinions and grooves slipping over each other. If a stone or other substance gets in a groove, the pinions will in a great majority of cases, overleap it by the vibratory lever allowing the pinion to rise without injury, and the most violent efforts of a restive or unmanageable horse can hardly derange the connection of the parts.

Your committee concur in the belief that Mr. Scripture is entitled to great credit for having brought forward a cheap, safe, effective and permanent horse power, which appears to them deserving of encouragement from any one requiring such a machine.

Respectfully submitted.

(Signed) WM. SERRELL,
JOHN H. RHODES,
H. MEIGS.

REPORT

On Messrs. Billings and Harrison's Hemp and Flax-dressing Machinery and process for rotting the same.

Your committee take pleasure in stating that they have examined the process and machinery above named, and that in all its details they find the process for rotting superior, and more certain in its results than any plan previously known to them. The rotting pools have peculiar advantages, from the ease with which the rapidity and regularity of the process can be controlled; and the after drying and evaporation of the aqueous matter, and retention of the feculent, without decomposition, as described by them, is theoretically correct and consequently practically useful. This method of rotting and drying will probably render American hemp fully equal to Russian, and the flax of our country as good as the Flemish or French.

The machinery for breaking has been only seen by the committee in operation upon flax, and when combined, as seen by them with the *skutching* process, the flax is ready for market, fully as well cleaned from shives, and freer from tow, than by the ordinary hand process of breaking and swingling; at the same time the strength of the fibre is not in any way impaired. The skutching process as modified by them, appears to possess some advantage over the usual form of such machinery.

Samples of hemp, (American water rotted,) broken and skutched in a state for market by the above mentioned machinery, in Missouri, were exhibited to the commitee, and are more clean, and better freed from shives, than any they have before seen, while at the same time the fibre of the hemp is equally carried out in thickness to the end of the head, and in their opinion, such hemp would waste less in hackling than that broken and cleaned by hand.

JAMES RENWICK, *Chairman.*
JAMES J. MAPES,
HENRY B. RENWICK,
JAMES R. CHILTON, M. D.
Committee.

New-York, October, 1845.

(B.)

COMMUNICATIONS FROM CONTRIBUTORS.

STATEMENT FROM W. B. ODDIE.

Rockland, Nov. 20th, 1845.

In answer to the questions contained in your circular of the 10th instant, I send you the following :

The soil I cultivate is a clay loam ; the ground was originally a bog, but by judicious blind ditching, made dry enough for any kind of grain. I always turn the sod in the fall of the year, harrow with the furrows in the spring, cross plow, harrow, and roll, then spread fifteen cart loads of manure to the acre, which I plow under previous to sowing the seed, then harrow, and roll again. The manure I use at the above rate, is principally from my piggery, mixed with muck.

The quantity of oats I sow to the acre, is two and one-half bushels, which I endeavour to get into the ground as near the middle of April as possible. The seed for this year's crop I obtained from Alex. Smith, Esq. I sowed six bushels, the return from which was one hundred and ten bushels, all sold for seed at one dollar per bushel. In harvesting, I am guided by the weather, leaving the straw in the swarth about twenty-four hours, then rake into bundles, previous to tying up ; after which, I stand up ten sheafs to a shock, and do not carry in for two days. The time of gathering depends upon the ripeness of the grain. I try always to cut oats before they shake out. Potatoes I plant in drills, after cutting to two eyes in a set ; then I leave them to dry five or six days, spread out on a floor. This enables me to detect any imperfection, which will always show itself in two or three days. I top dress the vines with lime as soon as they appear above ground, at the rate of 40 bushels to the acre. I have never been troubled with the rot For corn, I never put dung in the hills; use guano as a steep, one gill to one and an half gallons water, leaving the grain in this liquid 24 hours. Plough three times, and keep all weeds down. I cut the corn up at the ground always.

WILLIAM B. ODDIE.

BARLEY AND RYE.

LYNN, MASS., Dec. 13th, 1845.

T. B. WAKEMAN.

Sir: The rye presented for premium, was raised on a loamy soil, planted last year in potatoes, and manured with about 30 horse cart loads of barn manure per acre. The potatoes were dug in August. The last week in September the ground was plowed and harrowed, and a barrel of air-slacked lime sown. The rye was planted after it had soaked 27 hours in a solution of poudrette, (1 gallon of poudrette to 5 gallons of water.) The grain was harrowed in, grass seed sown and bushed in, and a heavy roller passed over the whole. On the 15th of July I tried to cradle it, but found it best to cut it with the sickle; left it four or five days as it was cut, then turned it over carefully, and the next day bound it with single bands, and housed it. It was threshed by hand. The following is a statement of the yield:

To 7½ days work,	$6 20	
" one bushel of seed and poudrette,	90	
Interest on land, 6 per cent,	3 56	
One barrel air-slacked lime,	33	
Profit on 95 rods,	25 35	
		$36 34
By 24 bushels rye, 85 cents,	$20 40	
" straw sold for,	15 94	
		$36 34

The barley was grown on an upland, loamy soil, planted last year in roots. The product was not great, about 36 bushels per acre, as it was much affected by the drought, though the grain was heavy and good. The seed was soaked 12 hours in a solution of poudrette, and sown the 15 of April. There are about two acres in the piece. I sowed three bushels barley, and 35 lbs. clover seed. The clover did very well; cut with the scythe about the middle of July.

To 3½ days days work,	$4 05	
" threshing by horse power,	4 00	
" seed and poudrette,	2 50	
" interest on two acres,	12 00	
" profit,	53 45	
		$76 00
By 72 bushels barley at 75 cts. (36 bushels per acre,)	$54 00	
" straw sold for,	22 00	
		$76 00

Yours, respectfully,
J. HAMMOND COGGESHALL.

MAIZE.

Lynn, Mass., Dec. 15th, 1845.

The soil upon which my maize was planted, is a dark loam, clay subsoil, underdrained; the crop last year Indian corn. The manure for this crop consisted of 28 horse-cart loads of night soil, composted with loam and muck mud. It was hauled on last winter, spread, and plowed under the 21st of May following; furrowed three and a half feet each way, a handful of compost dropped on each hill, and five or six grains of corn dropped on the compost. The compost was composed of four barrels of poudrette, one barrel of plaster, and fifty bushels leached ashes, well mixed. The corn was planted the 23d of May, and as soon as it was up, the cultivator was run through it both ways. It was twice hoed, without hilling, and cultivated twice. Two cwt. of African guano was applied on the hills. At the second hoeing, a part was mixed with fine dry muck mud, and a part applied alone without mixture. A large spoonful of the pure, and a handful of the mixed were the quantities applied, but I perceived no difference in the effect between the pure or mixed, and cannot say there was any decided benefit in either. The corn was topped October 10th, harvested November 10th. A part of the crop was a failure, either from the strength of the guano or the compost; I think the latter, as I noticed where we (having some left in the cart,) applied it plentifully, the corn did not grow well, but where the handful only was used, it did well. The following is a statement of the amount of corn obtained, together with the expenditures.

To 56 cart loads of manure at $1,	$56 00	
“ 30 days work, actual cost, with board,	22 22	
“ four barrels of poudrette,	5 00	
“ one “ plaster,	1 50	
“ 50 bushels leached ashes,	3 50	
“ 200 weight African guano,	5 00	
“ half bushel white seed corn,	50	
“ interest on two acres land, 6 per cent,	12 00	
		$105 72
Profit of crop,		58 94
		$164 66

By 130 bushels corn at 80 cents,	$104 00	
" corn, fodder, &c.	25 00	
" half manure,	35 66	
		$164 66

The yellow variety was planted on the same kind of soil, last year in grass. It was ploughed in the fall, and rolled with a heavy roller; forty-nine loads (horse cart,) of fish compost were carted on in the winter, and left in a pile till this spring, composted with dry muck, then spread and harrowed in; furrowed three and a half feet each way. A handful of poudrette, and five or six grains of corn allowed to each hill. Planted May 8th. It was hoed three times, and cultivated twice; the seed soaked in a solution of nitre as strong as I thought it would bear, but this did not prevent the crows from pulling it up badly. The yield was as follows:

To 49 loads fish compost, at $1,	$49 00	
" 35 days work,	25 72	
" six barrels poudrette,	7 50	
" half bushel seed, 13 oz. nitre,	56	
" interest on two acres at 6 per cent,	12 00	
		$94 78
Profit of crop,		113 87
		$208 65
By 94 bushels sound shelled corn, 118 at 80 cts	$150 40	
" corn and soft corn,	30 00	
" half manure,	28 25	
		$208 65

Very respectfully,

J. HAMMOND COGGESHALL.

STATEMENT OF SOLO WRIGHT JEWETT.

CORN.

NEW-YORK, Oct. 13, 1845.

Gentlemen—I send you 40 ears of my variety of seed corn for your inspection and consideration. It is the twelve rowed variety of yellow corn grown in Addison county, Vermont.

In the year 1833 I procured of Mr. Munson of Chittenden county, Vermont, a large kind of the twelve-rowed yellow corn, which I have carefully selected and cultivated each year to this day. A sample of four ears, marked A, is for your inspection.

On or about the year 1839 I obtained a smaller sort of the twelve-rowed variety of Eleazer Jewett of Franklin county, Vermont, which was of a very dark yellow, husks soft and pliable; it ripened about eight days earlier than the above named larger variety. I send you a sample in the four ears marked B. This I have also cultivated separate, and with great care. Both of the above are valuable kinds of corn for our State. Both mature very early. I have had the Dutton twelve-rowed corn, procured of Judge Buel, which was eight days later than either of above Vermont kinds.

Out of these two kinds, A and B, I have produced a third variety by crossing and carefully selecting. Forty ears of which is sent. For the last six years I have been carefully crossing, and at the time of planting, judiciously selecting such ears as appeared to be a medium between the two kinds; until I think I have procured the third variety, darker color than the kind marked A, but not as dark yellow as that marked B. This is very early corn, and much admired in our State. We plant it in rich loam land, hills 3 by 3 1-2 each way; 4 stalks in a hill. It produces about 50 bushels to the acre. The stalk is rather small, bearing generally two ears to each stalk; the kernels, you will observe, stand close together, a small cob and very stiff. But a very few "nubbins" or "pig ears" are gathered from this kind. The ears are generally sizable and sound; it is the best corn in our State. It took the first premium at the Addison county show, October 2d, 1845.

This corn planted farther south would of course grow larger, and not ripen in so short time as in our State. Within three years it would be equal or superior to that marked A.

Very respectfully,
Your ob't servant,
SOLO WRIGHT JEWETT.

WHEAT.

Flatlands, L. I., Oct. 23, 1845.

This wheat is called commonly the "Bergen Wheat." It was produced originally on the farm of Mr. Garret Bergen of Gowanus, Kings county, (now deceased,) from a few stalks of superior size and quality.

I sowed last year about six acres with this wheat, and two acres with the large red wheat; prepared the ground in the same manner. The Bergen wheat produced about five bushels to the acre more than the red. The farm upon which this wheat was raised is situated in the town of Flatlands, Kings county, Long-Island. The ground was planted with potatoes in the Spring previous to sowing the wheat, and well manured in the hill. The crop of potatoes was raised early, the ground immediately harrowed thoroughly, and all weeds of every kind collected and burned.

The ground was then plowed and cross-plowed, and one hundred and seventy bushels of leached ashes to the acre harrowed in. The wheat was sowed on the third of October. In the Spring I sowed clover, and rolled the whole field. The wheat was cut on the 5th of July and threshed early with a threshing machine. This wheat will be found to weigh sixty-five pounds to the bushel.

ELIJAH H. KIMBALL.

STATEMENT OF JOHN G. BERGEN.

Gowanus, Sept. 23, 1845.

The ground the summer previous to sowing was occupied by potatoes and squashes, of about equal quantity each. The potatoe ground was plowed after the crop came off, before manuring for the wheat; the squash ground was not. Manured the potatoe ground in the Spring with sea-weed from the beach; the squashes with street manure from New-York, spread broadcast; both crops manured in the hill, and both on mellow ground, or where plow and hoe crops had grown the previous year.

The ground was prepared for sowing wheat by carting thereon about 60 loads of street manure, (New-York corporation cartage,) at 12 1-2 cents per load and 15 cents freight; total $16.50. Plowed the ground immediately preceding sowing, and sowed about the 28th September, 1844, with Timothy, and in the Spring with clover. Wheat heavy in straw; heads large; about one-fourth lodged; heaviest in potatoe ground; harvested when ripe. Shelled out more than sufficient to sow the ground; on which was sowed a trifle less than four bushels. Threshed on the 8th, 9th, and 10th September by a machine. The straw being very large, the machine could not take the grain *out* clean, and in the longest straw which was lodged, probably one-fourth remained in the straw. Considerably injured while in the barn, where it had remained since harvesting, by mice, rats, and barn weevil. Measured when cleaned 86 1-2 bushels, or about 42 1-3 bushels to the acre. Ground surveyed and certified as containing 2 acres $6\frac{101}{125}$ perches. Variety selected, red beard, white wheat, three rows of grain on a side.

JOHN G. BERGEN.

STATEMENT FROM H. U. TIBBITS.

Yonkers, Nov. 24, 1845.

The ground upon which I raised my wheat was originally in meadow, giving a light crop for several years. In the Spring of 1843 there was about 20 cart-loads of long manure applied to the acre, spread evenly over the surface and turned under. The ground was then rolled and harrowed until it was mellow, and planted with corn and potatoes. The yield of potatoes was upwards of 60 bushels per acre, with the exception of a part that was planted two rows of corn and two of potatoes alternately, which yielded about a quarter more. For the present crop the ground was plowed once, and poudrette and bone dust sowed alternately, at the rate of ten bushels per acre. The previous crop on a part of the piece was potatoes, on the other pickles. That where the potatoes grew was sowed about the 20th September, the other ten days after. The seed was washed in brine sufficiently strong to bear a hen's egg, rolled in air slacked lime, and immediately sown broadcast at the rate of 1 3-4 bushels per acre, and harrowed in with the manure.

The yield was 20 bushels per acre, mostly of the white flint variety. Nothing was done to the crop from the time of sowing until harvest. The wheat was cut about the 10th of July, raked, bound, and set up in what is called Dutch shooks for two days, and then put in barracks.

Very respectfully,

H. U. TIBBITS.

POTATOES.

Jamaica, L. I., Nov. 15, 1845.

The ground was once plowed before manuring. It was then manured at the rate of twenty wagon-loads to the acre, of equal parts of barn yard and horse manure, and then plowed in. The cost was $25 per acre. The wheat yielded 28 bushels to the acre.

The potatoes were planted three feet apart in drills. They were manured in the drills at the rate of 15 wagon-loads to the acre, and yielded 250 bushels per acre.

Respectfully,

JAMES VAN SICLEN.

STATEMENT OF WILLIAM DEERE.

PUMPKIN SQUASHES.

WEST FARMS, New-York, Nov. 28th, 1845.

The nature of the soil upon which I raised my pumpkin squashes is yellow clay of indifferent quality, After once plowing, I furrowed the ground nine feet apart, and dug holes capable of holding about two shovels of manure. The previous crop was potatoes, manured with a compost of equal parts of marl, black mole, and yard manure, of which I applied one hundred loads. I planted my seed the latter part of May, dropping it in its natural state. From one quart of seed I can select 25 squashes weighing one ton.

Very respectfully,

WILLIAM DEERE.

PUMPKINS.

NEW-YORK, Nov. 20, 1845.

The soil upon which the pumpkins were raised, that took the premium at the last fair, is loam mixed with a slight sprinkling of manure from my stable. The crop that had been previously raised on the ground was one of ordinary garden vegetables. I planted the seed in the early part of May, all of which failed except one, from which extended six separate branches, each running about 20 feet in length, each pumpkin setting as near midway of each branch as possible. The seed was the same as that obtained the year previous from Mr. Gideon Moseley of Poughkeepsie, Dutchess co. In flavor and richness this far excels any squash or pumpkin I have ever raised.

Yours respectfully,

NATHANIEL FENN.

RUTA BAGA AND BLOOD BEETS.

Sir—I send you the following in answer to the questions proposed in your circular.

The soil is a sandy loam composed of decomposed micaceous rock, well worn and porous.

It was prepared by once plowing and harrowing, and there was put upon it 9 cart-loads of stable manure, the land measuring nearly three-fourths of an acre upon which the ruta baga and blood beets were planted. The soil where the tomatoes grew had no manure.

Planted the beets the second week in May; the seed was soaked 24 hours in warm water. The tomatoes were sown in hot-beds in March, and transplanted near the last of May. The beets I planted in rows about 2½ feet apart, 1¼ lb. of seed to the acre. The yield was 120 bushels of ruta baga and beets.

The tomatoes were set out in hills about 4 feet a part. After the plants had attained a sufficient size, I plowed three times between the rows, pulled out all the weeds, and the plants thinned to about 5 inches apart.

Respectfully, your ob't serv't.

GARRET MEAD.

CULTURE OF HOPS.

Morrisville, *Sept.* 20*th*, 1845

To the President of the American Institute:

Dear sir—I send you herewith a statement of the process of cultivating 2 acres of hops, of which the sample sent to the Fair for a premium was a part.

The ground was well plowed and manured with 40 loads of barnyard manure per acre, and planted with corn and hops. Last year the expense of cultivating the 2 acres for the present year is as follows:

41 loads of manure put in hills,	$30 00
Rise of polls,	45 00
Labor of cultivating 2 acres,	40 00
Use of land,	14 00
Harvesting and bagging,	87 50
	$216 50
Produce of the 2 acres, 2500 lbs. at 1s.,	312 50
Net profits,	$96 00

The above land is a mixture of dark loam and gravel well adapted to grass.

Yours respectfully,
EZRA LELAND.

STATEMENT OF GEO. W. BILLINGS.

Questions answered by Geo. W. Billings of Missouri, on the Culture and Manufacture of Flax and Hemp.

1st. What kind of soil shall I choose? and what manure?

Where there is most lime. On our best prairie land we add twenty bushels of lime to an acre; the lime should first be slacked. Use also good well decomposed manure.

2d. When and how often, and how deep shall I plow it?

Plow as soon as the crop is off the field in the fall; plow deep, and if necessary use the sub-soil plow so as to plow 12 inches deep. Then in the spring plow four or five inches deep.

3d. When and how shall I sow the seed—broadcast or in drills—and how many bushels to each acre?

As soon as the land is plowed in the spring, harrow it lightly, and sow two and a half to three bushels of seed to each acre, then harrow well.

4th. How shall I keep the crop clean?

The crops keep clean of weeds by the close thick growth of flax.

5th. How shall I gather the flax, and at what time?

Cut the flax with a cradle, having a scythe from eighteen to twenty-two inches in length. Cut as soon as the blossoms of the flax begin to fall.

6th. How shall I secure the crop when gathered? What quantity in a bundle?

Let the flax lie on the ground until it wilts. In fair weather it may lie there thirty-six hours. Wet weather must be avoided at this time, if possible. Bind up as much flax as a wisp of flax will bind in one bundle. Shock it on the field so as to prevent wet from getting into it. Do not stack it. Leave it in the shocks for five or six days. When the weather is favorable and it is about as dry as you would have your hay or oats, then house it.

7th. How long can I keep it before it is sent to market?

Fifty years! The flax is improved by keeping it a year. The gluten which is in it then dissolves more readily when you come to rot it.

8th. Is it worth my while to rot it on my own farm?

No, you cannot make so good a profit by doing it.

9th. Is it worth my while to have a machine for dressing the crop?

If you can raise two hundred acres of flax, then you can afford to rot and dress it. One hundred acres will not pay a sufficient profit.

10th. What is an average crop of flax in the United States per acre?

About two hundred pounds to the acre if you let it all go to seed, but four hundred pounds if you gather it in the blossom. Ireland averages five hundred and fifty pounds an acre, on one hundred thousand acres.

11th. Do you know how much it will cost to raise it per acre?

Twelve dollars an acre when housed.

12th. What is the cost of dressing it? How much can one of your dressing machines prepare in a day?

Three cents a pound, from the stack to the bale press. One of my dressing machines with seven men, will dress in one day six hundred pounds of flax, and so much tow is made by it, that it saves twenty per cent of the flax by my operation; and the same process answers for hemp. Flax, when rotted in water heated to ninety degrees of Fahrenheit, is done in three or four days. In raising flax, a part of a field should be sowed thin for the seed. Common Flemish and French dressed flax, imported into England for forty years past, brings them from four to eight hundred dollars a ton. This difference of value is owing to the difference of qualities which are assorted.

13th. Can flax and hemp be grown for a series of years on the same ground, or is rotation necessary.

I have known hemp grown on the same field perfectly well for twenty years in succession. The hemp crop is from seven hundred to nine hundred pounds per acre. I add lime to land for flax crop, but not for hemp. When flax is not allowed to go to seed, it does not exhaust the soil one half as much. It exhausts about as much as the wheat crop. Our corn and wheat in Missouri certainly exhaust our soil. We have already found the necessity of deep plowing and subsoiling the land. It is better and cheaper by far to me, to cradle flax than to pull it by hand in the old way. We do not consider the rotting and dressing flax an unhealthy business. We raise about 50,000 tons of hemp per annum.

APPLES.

MONROE, Orange Co , Dec. 6th 1845.

T. B. WAKEMAN :

Sir—I send you a short statement of my method of cultivating the trees from which was gathered the fruit, exhibited at the late fair of the American Institute.

I do not believe in trimming further than to remove such branches as exhibit signs of decay. I prune in the latter part of May, believing that the wounds heal quicker, and no check is given to the growth of the tree.

Horse manure I find to be much the best taken from the stable, and spread under the tree as far out as the top projects ; and not too near the trunk. An orchard of apple trees, should I think, be plowed once every four years, and then sown with timothy, which I think preferable to clover, as the roots of the latter generally run very deep, and withdraw vegetation from the tree.

Quince trees do best on a rich damp soil. I dress them once a year with slack lime, and prune them very little, merely removing the dead branches.

Yours, respectfully,
OBADIAH SMITH.

MANNING, ON THE CULTURE OF THE PEAR.

Salem, Mass., Nov. 27th, 1845.

Our pear trees are set at a distance of from 12 to 15 feet each way, and the apple trees 30 feet. In planting them, especial care should be taken that they are not set too deep; and that no cavities, or hollows unfilled by dirt are left among the roots.

For manure, we find nothing better than good stable dung (the older the better,) and decomposed vegetable matter. We have also used muscle bed, or sea marl, quite extensively, and with very good success especially on plum trees. Pruning is performed only to preserve the balance of the tree and to prevent limbs from interfering with each other.

We consider the best season for pruning to be whenever the wounds will heal over soonest, which is, in this climate from the 1st., to the middle of June. Insects do not trouble much, the method we have pursued with them, and which I believe to be the best, is to kill them all by hand while young.

Yours, respectfully,
ROBERT MANNING.

JOHN M. IVES'S METHOD OF CULTIVATING THE PEAR.

Salem, Mass., Nov. 19th, 1845.

My soil is a light sandy loam, with a sub-soil of gravel and clay, made retentive by the application of clay, and salt. The former I place upon the ground in the fall in heaps, and in spring spread it evenly over the surface, and plough it in; the latter I spread also upon the surface in early spring at the rate of 30 bushels to the acre. I cultivate pears upon the quince dwarfs, as some of the new Flemish varieties grow better on this stock, especially the "Duchess de Angouleme." I have been more successful in the cultivation of the plum since using salt. Upon *three quarters of an acre*, I placed last spring early in April, spread broadcast upon the surface at least four hogsheads of damaged salt; on the 1st of May this was spaded in. I prune in June, believing that wounds heal better at that period.

Yours respectfully,
JOHN M. IVES.

SULLIVAN BATES' METHOD OF RAISING CRANBERRIES.

BELLINGHAM, MASS., 6th, 1845.

I first commenced the experiment of the culture of the cranberry some eight years since, by transplanting the plants in their wild state, on to upland soil, of a clayey nature. After harvesting a crop of potatoes, I prepared the soil as for sowing grain, by plowing and harrowing, then marked it out lightly in drills, 18 or 20 inches apart. The following spring I perceived that not more than two or three hundred had survived. I then filled the vacancies by transplanting as before. In the fall I found I had been no more successful, than in the previous spring. Upon an examination of those first planted, I found many young plants shooting up from their roots. With these I filled up the vacancies, and found them all to survive. An abundant proof that they will become naturalized to a dry soil, and require no more trouble in the raising, than the strawberry, or any other plant. I have since made experiments on different soils, and find that they will do well on any ground that will produce the potatoe. The first season we must not expect much fruit. In the third or fourth, the plants will cover the whole ground, yielding from two to three hundred bushels per acre. From half an acre I have obtained 104 bushels, and should no doubt have gathered many more if they had not been destroyed by an early frost. I consider the cranberry crop, as sure as that of any other fruit. It is sometimes injured by late spring frosts, while in blossom; and sometimes by early frosts in August, as was the case this year. Those who have land bordering upon a running stream of water, that can be stopt, and made to overflow it at night when an early frost is anticipated, and withdrawn in the morning without injury to the plants, need have no fear of failure in their crops.

The time to harvest the cranberry is generally from the first to the middle of September. They are gathered with rakes made expressly for the purpose; one man gathering from 30 to 40 bushels per day, with the assistance of a boy to collect the scattering berries. They grow to double the size of those in the wild state, of much better flavor, and command in market 30 or 40 per cent more than the others. I shall have plants to supply those who wish in the spring.

With much respect,

SULLIVAN BATES.

JAMES EWBANK'S METHOD OF CULTIVATING ISABELLA GRAPES.

Flushing, Nov. 24th, 1845.

I plant my vines in an ordinary soil, and pay but little attention to the ground culture.

My vines are planted against a house, and have a southern exposure, the building protecting them from the northeast and northwest storms. For several years past I have had abundant crops of well-ripened fruit, and from observation am inclined to think that the fertility of my vines is attributable to position more than character of the soil; and above all to the *high training*, which is some twenty feet upright, and then horizontally over an arbor, which gives the vine a free circulation of air and light. I have noticed that all vines yield better the farther the fruit spears are from the roots, if due attention is paid to elevating the vine, so that light and air have free access beneath. I invariably prune later than is the custom of my neighbors, and not until the sap runs freely, say in March, or according to the condition of the season.

I am of opinion that the grape should be trained high as possible in an upright position, say twenty feet, and then horizontally towards the south, and no fruit be permitted to grow upon the upright part of the vine. The greater height the vine has when in full foliage, the better the prospect of a full crop. By this process my grapes ripen simultaneously and uniformly. I am inclined to think, that greater attention to ground culture would add much to the size of my fruit, without affecting the other excellent qualities of my vines.

JAMES EWBANK.

WM. A. SWAIN'S METHOD OF CULTIVATING ISABELLA GRAPES.

The natural soil way, a clay loam, very shallow, but made 2½ feet deep, by trenching and adding good stable manure. Each vine has a space of about 4 feet each way, which has the best of tillage during the summer, being highly manured and kept fine and clean.

The vines were put in their place 3 years ago last fall, about one-half were from cuttings put out the previous spring in a rich compost.

The other half were vines two years old, from R. T. Underhill. The cuttings are much the largest and finest vines, and bore the largest crop of grapes. They have always been trimmed in February ; the first season's growth was cut back to within two feet of the ground ; the second year's growth was one half cut back, so that a small proportion of wood only might be left to each vine compared to the size of the root. The crop was about 1000 lbs. upon 22 vines. I used a great quantity of strong ley made of oil soap to water with during the dry weather of each season.

Very respectfully,
WM. A. SWAIN.
Port Richmond, S. J.

NOYES ON THE CULTURE OF GRAPES.

STONINGTON, Jan. 1st., 1846.

Sir : In answer to your circular, I send you a statement of my method of cultivating the grape.

Those which I exhibited were taken from vines five years old, always spur-pruned until the past season, when part were spur and part cane-pruned. The soil dry and sandy, the roots placed outside the glasshouse in a border twelve feet wide, well filled with bones, the stem taken under ground into the house, and trained to rafters eighteen feet long.

On the 1st of December, 1844, I pruned all my vines, 56 in number, which are in four apartments, half spur and half cane trimmed, and after the closest examination I am not satisfied which is the best way. I have, the past Dec., 1845, been governed by the appearance of the vine, and cut accordingly. On the 15th of Dec., 1844, I laid the vines in a trench, inside the house, and covered them with dirt four inches deep, then opened the windows and doors and left them so until March 15th, when the vines were raised and washed, and on the 1st of April placed under the rafters. When the grapes were as large as peas, I commenced thinning out the old and new wood when it was found too much had been left at the previous pruning, and continued to prune as often as once a week until the fruit was fit to gather, leaving certain branches to use for the next year, and keep up a healthy circulation of the sap. The border was manured from a hog-pen, but the greatest benefit was derived from a free use of soap-suds, dish-water, and other slops from the house. I am indebted to the Rev. Dr. Patton, of your city, for this mode of watering my vines.

I had at least one ton of grapes as good as those exhibited. I used no fuel to warm the house, but as often as possible got it to about 65 degrees of heat, when the leaves were started 70 to 75 degrees, and during the summer kept as near 85 or 90 degrees as I conveniently could.

Respectfully yours,
THOMAS NOYES.

STATEMENT OF GEORGE M. PATCHEN ON HORSES.

Brooklyn, Nov. 15th, 1845.

Cassius M. Clay, stallion, half-brother to Logan, also a stallion, were both exhibited at the late fair. They are very fast trotters. C. M. Clay is a dark bay, two years and five months old the 17th day of last September, full 16 hands high, matchless in trotting, speed, uniformity of parts, and equalization of muscular power, a paragon of excellence and symmetry. He was sired by Henry Clay, who was sired by the unrivalled trotting stallion Andrew Jackson. The dam of Henry Clay was the fast trotting mare Surry ; remarkable for her success in beating the best horses in her day, Ephraim Smooth, Paul Pry, and others, at two mile heats. The dam of C. M. Clay was a celebrated mare bred by T. Roch, Esq, of Philadelphia, well known as a breeder of trotting horses. C. M. Clay was taken from the mother at five months old, fed on bran and hay during the fall and winter, and continued in the spring and summer, with a small quantity of pasture. When 18 months old he was broke to the saddle and harness, and the muscle much strengthened and enlarged by the exercise of breaking. At the time of breaking in, the second winter, gave him eight quarts of oats and hay pr day, until the following summer, when I gave him grass in the stable for two months, but no oats during the time of feeding grass.

I now purpose devoting C. M. Clay and Logan to the improvement of carriage and farm horses. With good mares, I am confident of success. I have proved beyond a doubt, that a distinct breed of trotting horses can be produced from 16 to 17 hands high, compact, and perfect in form, with an equalization of extension and lifting muscles: that is, to extend far, and lift quick and strong, but not very high; such action is certain to produce speed.

The difficulty at present with large carriage horses is, that they have not got muscular power to travel with much speed, in consequence of which they soon tire, and if you urge them on you make a toil of pleasure, at the same time running the risk of injuring or killing them. Not so with fast trotting horses. It is a pleasure for them to travel, which gives pleasure to those who are riding. They have great power to continue fast travelling, or any kind of labor, and generally a vigorous constitution. They do not require any more care or feed than the common farm horses, and their value is twice as great. They would give large profits to breeders, and present strong inducements for them to improve the breed of horses, and stock in general.

Violetah, a chesnut, full-blooded brood mare, 8 years old, 15¾ hands high; was got by Gohanna, out of the dam Medoc, and was in a $5,000 stake, paying forfeit in consequence of an attack of distemper. Fed as blooded horses in general.

Narcissus, a sorrel filley, 17 months old, 15 hands high; got by Logan out of a Stargayer mare; was taken from the mare at 6 months old, and fed with 6 bushels of bran, sugar beets and hay per day, during the winter. In the spring was turned out to grass without any other feed.

Yours respectfully,
GEORGE M. PATCHEN.

STATEMENT OF JACOB LATTING.

LATTINGTOWN, Oct. 20th, 1845.

Noticing the intention of the Massachusetts Agricultural Society of sending to England for the best breed of dairy cattle, induced me to look at minutes made on reading English reports of their cattle, and find the following.

A cow kept by Wm. Crum, of Lewis, Sussex county, yielded, in 1805, 540 lbs. of butter; in 1807, 675 lbs.; in 1808, 466 lbs.; and mentioned that a cow kept by the Rev. Mr. Hacket, gave 19 lbs. of butter, averdupoise weight, in one week.

I have a cow that was put to pasture in the early part of June; about noon she was brought in by the maid, with the milk streaming from her bag, and she proposed milking her three times a day. At each milking she gave between nine and ten quarts, averaging about 28 quarts per day, yielding, in three days, six lbs. of butter. She continued that course until the last of July, when the pasture growing short, she was milked but twice a day, the average yield between 18 and 20 quarts per day, making four lbs. of butter in three days, at which rate she is now proceeding.

With much respect,

JACOB LATTING.

STOCK.

WATERTOWN, CONN., Dec. 20th, 1845.

The bull exhibited by me, was a full blood Devon, five years old, and was fed when young on a short allowance; afterwards kept on grass and hay, with little or no grain. My experience has taught me that nearly all animals raised on short allowance when young, produce the most valuable offspring; they are less turbulent, and give less trouble in their care.

The young Devon heifer offspring of the above bull, was fed on skimmed milk after four days old until she was about three months: since that time has had a short allowance of grass and hay.

The merino ewes were bred from sheep imported by Daniel Humphrey in 1802, and crossed by others imported by Peck and Atwater in 1810. Their great grandsire was a full blood Excurial, imported in 1811 by John Deforest. I think they can be called pure blood Spanish merino sheep. They were raised by short keeping. The fleece of two weighed, when cut last spring, 12 pounds.

Yours with respect,

JACOB N. BLAKESLEE.

SHEEP.

ALBANY, Nov. 19th, 1845.

At the late fair, I exhibited pens of the Southdown and Cottswold breeds of sheep; the former bred from importations made 1836 and '38, the latter from an importation made in 1840. My flock now number 100.

My ewes are fed upon straw and turnips throughout the winter, til the time of lambing approaches, (about the first of April,) when hay, a few oats, and an additional allowance of sweeds are given to them. At this time I have generally a small field of rye sown in the fall purposely for early spring feed for the ewes, which they run upon a portion of each day. This, with the turnips, gives a fine flow of milk, which forwards finely the lambs. My experience has shown me that I can make an April dropped lamb reach the same weight in October following, that one dropped in February could do, with much more expensive feeding to the ewe dropping the earlier lamb. The field of rye thus fed in the spring I usually plow over in June for turnips.

It will always be found with the animal, as with the vegetable it feeds upon, that its growth and early maturity will depend much upon its thriving rapidly, and without check in the earlier steps of its growth, and the plan I have adopted furthers that end. My great endeavour is not to have this checked throughout the first year of its existence. In this, I think, lies great economy in rearing stock.

In early August the lambs are weaned, and are then placed upon the best young grass, and are continued on that till October, when a few oats daily are added to their allowance. I sometimes have hurdled them for a few hours in each day upon turnips; when placed in their sheds for the winter, they are fed hay, sweeds, and a few oats daily.

The greater of the ram lambs are made wethers, a few only of them, showing desirable qualities, are kept for sale as rams. The ewes are placed to ram in the third year, and the wethers are, during their second winter, fed on hay, at 22 months old, when they have yielded me to the butcher from $10 to $14 each.

Very respectfully,

J. McDONALD McINTYRE.

SHEEP.

MILTON, Nov. 25th, 1845.

The sheep exhibited by me at the late cattle show, were of the Cottswold breed, all from imported stock.

The wether that received the premium, was two years old, and was fed on grass until six weeks previous to the exhibition, when he received each day a half pint of oats, and a like quantity of corn, mixed together. This breed of sheep will thrive on as short an allowance as any other. When liberally supplied with grass, I have found their capacity to lay on flesh to excel any other breed that has come under my notice. They cut a heavy fleece of long, soft, silky wool, such as I exhibited at the fair; cut from eight to ten pounds, which meets with ready sale, and at a greatly advanced rate since the introduction into this country of the manufacturing of mouselin-de-laines. Those slaughtered at two years old weigh from thirty to forty pounds per quarter.

Respectfully,

EDWARD HALLOCK.

JONES'S SEED PLANTER.

This machine is composed of a horizontal, rectangular frame, supported on the axle of a large forward propelling wheel, and on that of a roller at the rear. The frame contains, and supports the several parts of the machine, and from the rear end rise the handles by which the machine is guided. The hopper, which contains the seed to be planted, is arranged directly behind the propelling wheel, at the top of two upright posts, and over the spout which conducts the seed through the plow into the furrow. At the bottom of the hopper there is a wooden slide, upon which the seed rests, working between two iron guides, and resting on an iron plate, which is supported by two hanging screws; by which means the space between the guides and rest plate is increased or diminished, to suit the different thicknesses of the slides used in planting the various kinds of seeds.

The slides are perforated with holes, of the proper size to contain the number of grains or seed to be dropped at a time. The seeds fall into the holes, and rest upon the iron plate, preventing them from falling until the slide is moved back or forward; when they are carried from over the plate and fall through the spout and conductor into the furrow made by the plow of the machine. There are two bushes, which sweep the upper surface of the slide, and strike all the seed off of the holes which are not below the surface. The slide is connected by a vertical screw, with a vibrating rod or bar, supported on two curved standards, with openings, in which it is moved by the revolutions of a heart-wheel or cam, arranged in a notch in the said vibrating rod. The motion is given to the heart-wheel, or cam, by means of a crossed band passing around corresponding pullies, on the axle of the propelling wheel. The plow, in making the furrow, also conducts the seed into it, and it is closed by iron covers placed close behind. The roller is attached to two iron arms, connected by a cross bar, from which bar there rises a segment, passing through a hole in the end of a screw-bolt; drawing the segments firmly against the end cross piece of the frame, and holding it in any position desired, for the purpose of regulating the depth of planting. The distance between the dropping is regulated by changing the bands on the different sized pullies; thereby varying the motion of the slide; and it consequently drops more or less frequently, in passing over a given space. This machine can be used to great advantage in planting corn, as it is easily regulated to plant any number of grains at any distance apart in the row, and at any desired depth. It also answers admirably for planting broom corn, sugar beets, onion seed, &c. Its cost is $16; very simple in its construction, and can be repaired with little trouble. It is drawn by a horse, and will deposit the seed well in the ground in about the same time that it requires a man to strike out the ground with a plow; thereby saving the labor of boys to drop, and men to cover the corn.

Respectfully,

JOSEPH JONES.

HAYNES'S HORSE KAKE.

Jersey City, Nov. 25th, 1845.

This machine is very simple in its construction. The teeth are of wire, $\frac{1}{8}$ in size, inserted into one head, and coiled around another, so as to give all the elasticity desired ; and also increase their durability.

It can be used on any ground, rough as well as smooth, with great facility. It will rake as clean as a hand rake ; and with careful usage will last until the teeth are worn off so short, as to be incapable of holding the hay. This of course will depend very much upon the nature of the ground upon which it is used. If broken, it can be repaired by any one accustomed to make agricultural implements. As a labor saving machine, it may be ranked among the first. During the last summer one of them raked 20 acres of hay in half a day. Many farmers have said that they would much rather have one of these rakes during the hay season, than the best hired man they could get.

Very respectfully,

A. HAYNES.

THORNE'S HAY, STRAW, AND CORN STALK CUTTER.

This instrument is four feet four inches long. The box in the mouth or cut is eight and a half inches wide, and the depth of cut is three inches, tightly pressed by springs, attached to rollers, which serve as feeders. These are driven by finger irons, of which there are two, fastened to a beam, working on the centre. Attached to this is a rod connected with a crank on the balance or fly wheel, which crank is made to revolve by the balance wheel.

The balance wheel is hung on the main shaft, likewise the arms to which the cutters are attached ; the latter or knives are in four pieces, so placed on the arms as to form two double curvatures, or spiral to the centre, the same being a rotary of a cylindrical form, at each revolution of which two cuts are made.

The cutters run in two cast iron stands, which are fastened to the two front uprights of the frame. The cutters are connected with two spur wheels, one of which is on the main shaft, the other on a stud, which forms a handle or crank, by which the machine is driven. It makes three cuts with every entire revolution of the crank or handle.

The advantages of this machine are its simplicity, its strength, and the facility with which all the knives may be sharpened. It is seldom or never out of repair, and if so, can be put in order by the most casual observer. It is portable, and cheap, the cost being but twenty-five dollars. It will cut of various lengths, from the sixteenth of an inch to two inches. With a hand machine, a person may cut a ton of hay a day; with the aid of a person to feed it, the proprietor has cut 50 weight in four and a half minutes. With the horse power attached, a person in Orange county cut 100 sheaves of corn stalks in one hour.

THOMAS P. THORNE.

Fishkill Landing, Feb. 4th, 1846.

(C.)

EXTRACTS

From Communications made to the American Institute.

The following is from a practical farmer in New Jersey in relation to the treatment of salt, hay and sedge.

He states :—That after three years experience he came to the conclusion that by mowing all his salt meadows he improved them very much. By placing a large portion of the grass in his barn yard, where he kept some 40 head of cattle he could make more manure than he could well use, make it cheaper, and thought it of better quality than any he could get. His plan was to haul it from his barn-yard fall and spring, pile it in as large heaps as possible, and on every two or three loads of his manure to strew two or three hundred pounds of potash, and cover the whole with sods, and leave it so until it was required to spread it, and then just before spreading he would turn it over. The cost of mowing, raking and carting the grass from the meadow to the barn-yard was $1.25 per acre, each acre yielding five farmer's loads of grass. He made the comparison between the cost of 100 loads of manure prepared in this way, and delivered on the field, and a like quantity obtained from this city, as follows :

$1.25 per acre, for five loads, is for one hundred loads,...	$25 00
Team and man at $2 per day, for 15 loads, is for 100 loads,	13 33
do for hauling 30 loads per day, ...	6 67
100 pounds potash sweepings at 3½ cents per pound,......	3 50
Labor in covering, ...	50
	$49 00

100 loads New-York street manure,	$28 00
Hauling 20 loads per day at $2, is for 100 loads,	10 00
Freight at 18 cents per load,	18 00
	$56 00

For 100 carmen's loads. You must bear in mind that a carman's load is little more than half one of our farm loads, consequently my manure would appear to cost 25 cents per cart load less than one half the price of that manure.

I do not hesitate in saying that my soil has experienced greater benefit from this manure than from any other I have ever used, that is in reference to the condition of the soil after cropping. As an objection to the use of this manure, it is said that the product of marshes and swamps abound in the larvæ of insects. By adding a due proportion of lime, the larvæ will not only be destroyed but also the grubs that are already in the ground.

AN ANALYSIS

Of Barren and Improved Soils and the Muck used, by Dr. Field.

We are indebted to Mr. Thomas Kerr for the following analysis of soils. He observes there is no room for dispute as to the necessity of exact knowledge of the laws of nature, if we would have truly successful agriculture. I find Dr. Field's muck to be very nearly pure clay with 2½ per cent of vegetable matter.

The marl in composition consists of clay, 64 per cent.; of lime, (43—71 to 100)—28 of lime. Vegetable matter in the proportion of 38.

Carbonate of lime,	64	per cent.
Vegetable matter,	4	do
Clay, pure nearly,	13½	do
Moisture,	18½	do
	100	parts.

Barren Soil.

Sand 74 per cent. Sandy loam consists of—

Water,	3	per cent.
Organic matter,	3½	do
Mineral matter,	93½	do
	100	parts.

Its organic matter—

Soluble manures,	2	per cent.
Insoluble do	1½	do
	3½	as above.

Its saline matter—

Soluble saline matter,	2½ per cent.

Consisting of potash, soda, azotized body as N. H. with no trace of lime, phosphoric, or sulphuric acid. The cause of sterility is the evident want of lime, the phosphates and sulphates, without which no crop can be raised.

Improved Soil—mould and lime added.

Its mechanical texture is a loam—60 per cent of sand.

It consists of water,	5	per cent.
Organic matter,	5	do
Carbonate and other salts,	6	do
Lime, sand, clay and other minerals,	84	do
	100	parts.

Organic matter—

Soluble manures,	3	per cent.
Insoluble do	2	do
	5	as above.

Mineral matter—

Soluble 6 per cent; consisting of potash, soda, lime, N. H., and phosphoric acid.

It is still wanting in some of the valuable mineral substances.—But I think it is very probable that sulphuric acid is present, though in such small proportion, that it cannot be correctly determined by analysis. Of magnesia and the metalic oxides, which are absent, their place may be supplied by those ingredients present. Lime is found to do in the place of magnesia, while alumina is found to be a substitute for the oxides.

Swamp Muck or Mould.

Consists of water,	30	per cent.
Organic matter,	37	do
Mineral do	33	do
	100	parts.

Its organic matter has of—

Soluble manures,	23	per cent.
Insoluble do	14	do
	37	as above.

Its saline or mineral matter consists of—

Soluble,	2½	per cent.
Insoluble,	30½	do
	33	as above.

Consisting of ¾ of 1 per cent of the salts of lime, and 1¾ per cent of potash and soda.

Salts of lime being—

Phosphate of lime,	8½	of 1 per cent.
Sulphate do	1½	do
	9½	or ¾ as above.

Besides the addition of organic or vegetable food, these valuable salts were added to the land, lime also—this, with the phosphates and sulphates, forming, in all probability, the chief beneficial effect of the application.

This muck has mineral matter in it indispensable to vegetable growth. I have ascertained by analysis that there is 37 per cent.

AN ESTIMATE

Of the Consumption of Cattle in New-York city.

The following is an estimate of the beef, mutton, pork, and veal killed in New-York city, &c. per annum, made by Mr. Wakeman, the corresponding secretary, from information obtained from several of the leading butchers, and by him submitted to the institute.

Beeves.

Heads.	Av. weight, lbs.	Total, lbs.
50,660	675	34,400,000

Sheep and Lambs.

150,000	42	6,300,000

Hogs.

City killed.	County killed.	Av. wt.	
25,000	150,000	150	3,750,000

Calves.

16,650	60	999,000
	Total,........	45,449,000

Assuming the population of the city to be 350,000, and that the consumption of animal food averages four ounces per day to each, the total consumption in a year amounts to 31,937,500 lbs., to which may be added the amount consumed by commerce in the coasting and foreign trade, and also by the population in the immediate vicinity of the city, 13,472,500 lbs., a fair estimate, it makes up and confirms the total before stated of 45,449,000 lbs., which at 3 cents per lb. amounts to $1,363,470.

MARL.

From a variety of communications made to the Institute on this subject, we extract the following:

Dr. Underhill.—" Marl is chiefly formed from decomposed shells; lime, therefore, becomes the principal ingredient; potash and soda are also found in it, and are its best parts. The Jersey marl is very valuable, principally on account of the constituents, soda, alkalies generally. The alkali is the most important.

"In reference to muck deposites, I am aware that there are thousands of them in which you find no marl. The muck is an alluvial deposite. On my Croton Point farm, I have put fifteen thousand loads of the muck from the margin of the Croton river. There is no shell, no marl in it—there are the remains of the bones of fishes. I find this muck excellent as a manure—winter freezes it, (I draw it out in winter,)—it freezes and in the spring it crumbles. I put it into a tilled crop, plow, harrow, and hoe it into the soil. If you put on this alluvial matter as a top-dressing on your land, you may justly expect a fever and ague, for it has often proved its power to furnish the intermittents when exposed to the influences of sun, air and moisture. It is highly carbonaceous and must, for safety, be well mixed up in your soil. My land so treated with this muck bears severe drought. No ordinary soil or barn yard manure stands a dry time at all like it."

Dr. Field.—"I consider our marls highly valuable. Such materials are abundant in our country, and of the highest importance to our farmers. The formation of muck or alluvial matter over shelly marls are common; the muck on my farm has proved its fertilizing powers. I have prepared it in various ways: This year I have raised a thousand cart loads of muck upon my fields; my crops are fine. I have it hauled out of the muck holes in August, when the weather is dry, after the hurry of the harvest is over; when there is an intermission of labor on the farm, I haul it out with a scraper to a spot where the water will drain off; when winter comes it freezes thoroughly, and in the spring it will crumble. I then make a layer of it one foot thick, on that 4 inches thick stable manure, then 1 inch of slaked lime, then a layer of muck as before &c., until the heap is 7 feet high. My pears, beans, onions &c., grown on land manured with this compost, are luxuriant. I also place the muck on the floor of my stable, sprinkle a little ground plaster over it, then place the bedding over that, when being trampled and having the urine &c., in it, I take it away and begin a new layer of muck, &c. In this way the smell of the ammonia is absorbed. I treat the barnyard in the same way. Dutchess county has an abundance of muck, it is of a dark color, and lies several feet unusually in thickness over marl full of shells. By analysis it is found to contain soda and potash. It is an excellent manure for fruits, flowers and vegetables, on land formerly barren.

CULTURE OF THE PEACH.

A gentleman in New Jersey, writes thus. "I planted on my farm 900 peach trees. I treated them in every way applying ashes and lime, and cleaning the roots, and had 120 left. One near my house, I cultivated as I would a cabbage, leaving no grass or weeds near it; that one is a healthy and vigorous fruit bearer, *cultivation does that for it.* The tree and all plants must, like animals, have good and proper food. The grub worm does not mind ashes, lime, or salt, he will crawl out of it, and I have tried by wrapping them in these substances to kill them but find they do not mind it. I tried it on bots taken alive from a dead horse; the bots were not killed by it, nor by any of the articles given to a horse as remedies for bots. This animal does not die either in or out of a horse by being enveloped in the articles. As to the peach tree, I wrapped a bandage, and a mat over that around the body of the tree, just under the forking of the branches, yet the worm eat down to the ground. All the remedies applied at the roots of the tree, were, I have no doubt, useful to the soil; they invigorated the tree, but did not kill the worms.

"Tansey planted at the roots of trees has been found to prevent the attack of worms. The worm bores a hole through the bark at the edge of the ground; its eggs are hatched in June."

CURING MEAT.

Mr. Ethan Campbell—"Between the years 1838 and 1842, I made several experiments on curing meat. I tried the exhaustion of air, and high pressure also. I had an iron cylinder made; put in meat, exhuasted the air by steam vacuum, proved the vacuum by using a glass tube with a portion of water through which the air might be detected in passing. I made a perfect vacuum. I then administered a saturated solution of salt, applied a pressure of five hundred pounds an inch; the meat was found after all this not to contain a particle of salt. I broke the cylinder by over pressure. I then made a cylinder of the best cast iron, perfectly tight, solid at one end and the other capped with great accuracy and strength. I placed hams in it, exhausted the air, then admitted the saturated solution of salt, kept on pressure until portions of the liquor passed through the pores of the iron ; kept it on for half an hour. The ham was not at all salted. I repeated the experiment leaving it under pressure for 24 hours ; the hams were not salted half an inch into the meat. I then tried it for four days, the meat started from the bone, and assumed a round figure. I cut it to the bone and found no salt in it. I put it into fresh water to test the salt, there was none. I tried the experiment for a week, there was no salt in the meat, not one particle. I then left the meat under like treatment for a fortnight with the same result. The pressure applied in these experiments with the cast iron cylinder amounted to three thousand four hundred pounds, per square inch.

"I searched for the philosophy of it ; I carefully examined the meat I put hams into the cylinder, exhausted the air, then admitted brine and it was perfectly exhausted in one week. Time is required for the penetration of the salt, and such is the constitution of the meat that pressure appears to be useless in infusing salt into it. Pressure acts of course greatly on the exterior surface of the meat and in the direction of radii to the centre."

ROOTS FOR STOCK.

Extract from a letter from Wm. Mc'Inster of Conn., on the subject of roots as food for stock.—" I consider the root crop as the only sure one. I therefore have been in the habit of raising roots for my stock for several years, and I do not think I could do well without them. I will therefore state, as nearly as I can, my mode of raising them, feeding, &c.

" Carrots I consider the most valuable ; I feed them to all kinds of stock ; and think them better for my horses than oats, and for my milch cows in winter, they not only give the butter color, but flavor equal to summer-made butter. I raise them in drills, the rows about 20 inches apart, and the carrot in the row say from four to six inches ; mangle wurtzel in drills two feet apart in the row, and one foot in the drill ; sugar beet the same distance ; ruta baga two feet apart in the row, and about nine inches in the drill ; and common turnips I sow broadcast as follows : say in June I find some pieces in my lots, in tended for mowing, that the grass has winter-killed, or in some way is destroyed: these pieces I plow up, taking care to turn them over as well as I can, sometimes before and sometimes after mowing, but always in time to sow and reseed with grass by the 20th July. I roll my land, and harrow it well the same way I plowed it, and put on about 15 cords of manure to the acre, (barn-yard manure); I harrow until all is well mixed; I then sow my turnips, say one half pint of seed to the acre; it is my wish not to have the seed nearer than nine inches of each other; in doing so, I give my grass seed a chance to take root. At the time of sowing my turnips, I sow a compost prepared as follows: ashes fifteen bushels, bone dust five bushels, plaster one bushel, per acre; in this way I always raise good turnips, and I think at a trifling expense, as all that was done was with a view to reseed the land, &c. As to the other root crops, the same rule as to manuring will apply to them, but the ground must be made mellow to any depth you please, the deeper the better. I use the same compost in the drills for all my roots, taking care at all times to apply it in a moist condition. I raised the last season the white Silesian carrot at the rate of 960 bushels to the acre; but I prefer the orange carrot; as to feeding roots, I feed them to my fat cattle, cows, horses, and hogs, in the raw state; nor do I think it advisable to cook them for any animal except the fatting hogs. I then boil them and mix provender, and feed when soured. Quantity per day: I feed to my fatting cattle, say three-fourths of a peck, to be fed at two different times, say morning and evening; my milch cows half bushel per day; my store hogs, of beets three lbs. per hog, and one gill of corn per feed. By feeding in this way, I have always found my stock to improve, and I have never had them to scour or be injured in any way from their feed on roots. I continue feeding on roots to my fat cattle until about the 1st of January; I then commence feeding on meal, made with corn and cob, and continue the roots at discretion in smaller quantities."

INSECTS.

The depredations of all other animals upon our crops, does not amount to one quarter of those committed by insects. This country loses annually from five to ten millions of bushels of wheat by their ravages. This State loses every year, by the Hessian fly and the wheat worm, between one and three millions bushels of wheat: less perhaps for a few years past. Scientific men have taken great pains with the history of insects; but we require plain practical instructions very much. The canker worm has destroyed orchards to the amount of hundreds of thousands of dollars within the last ten years. Look at our losses in peach trees, from another insect, in the last fifteen years; they are enormous. I have made the habits of insects a study for many years; and we may study on for twenty more, it is well worth the trouble. To avoid the fly and worm in wheat, sow early or late; when your grain has attained some heighth, you will find the nits of the insect on it; then turn in sheep or young cattle, who will eat off all the blades, nits and all. If you sow late you avoid the nits—you may miss them; besides, the manure left by your sheep is very good for your crop.

The wheat worm made its appearance in Alabama about twenty years ago. It was supposed to have been imported in wheat, and has been extending in every direction, at the rate of five or six miles per annum, so that already it operates in a circle of about 200 miles in diameter. The egg is deposited on wheat in its blossom and its milky state. The fly which deposites it may be seen hovering over the fields in immense numbers. It resembles the common house fly somewhat, but is longer and of a dark gray color. The worm perforates the grain, sucks out the milk, leaving your grain apparently sound, but really all chaff.

Now as to the remedy. This wheat worm has destroyed hundreds of thousands of bushels of wheat. I know but one remedy, and that is easily tried, and said to be effectual. Take quick lime, slacked perfectly fine, when dry sow it with your three fingers (just as you do grass seed,) all over your wheat field, soon after the wheat is in blossom, and when you see the flies hovering over the field—sow in this way about two pecks of lime on an acre. The dew will moisten the lime, and it then reaches the insect larvæ and kills them. This process has saved a whole wheat crop on one field, while a neighboring one was destroyed by the worm. The damage done by this insect is not the same every year, it depends upon the season. Another insect, called curcuilo, stings apples; another the plum; another the pear; and another the peach, apricot, and nectarine. More than half our apples are stung soon after they are formed. The nit is put into the apple when very young; it soon hatches and begins to eat; if it strikes the heart of the apple, the apple soon falls off, so that the wounded apples begin to drop, from the size of peas. Gather all the wounded fruit carefully, destroy them—turn in hogs, who will eat them all up—make a hog pen of a plum orchard, and you can have good plums; paving around the trees has saved the fruit, the worm cannot enter the ground to continue the race. The wound on the plum is seen by a gummy exudation. Birds pick up a good many of the insects fallen to the ground.

I was annoyed in my vineyard by the rose bug. I first picked them off in basins with some hot water in them—held them under the vines, and touched them—the bugs fell in. I killed many basins in that way. At length I discovered whence all these bugs came. I observed that they issued from holes in the ground, like a pepper box. They first crawled up the trees—gradually acquired the use of their wings—had remained all winter in the ground, and the new progeny return to it in autumn. By plowing late in the fall, I turned them up to freezing weather, and thus got rid of them all but a few. What few now appear I have picked off by my workmen. Whoever will show us practical methods of saving all our crops from the insects, will benefit his fellow men millions of dollars.

R. T. UNDERHILL.

FENCES.

Wire fences are made by planting posts firmly in the earth, at a distance of eight or ten feet from each other, and then by means of some tension machine, stretching any required number of wires, at suitable distances, one above the other, from post to post, and then securing them by means of a turn around the stems of large headed nails driven almost home.

These fences, if properly made, will turn any animal, even the most vicious, as I once had an opportunity of witnessing near Philadelphia, in the unavailable attempts of a furious bull to pass one of them. They will be more or less durable, according to the material used. When trees are substituted for posts, they present a beautiful relief to the eye on large cultivated farms, are enduring, and may, if the mulberry or fruit bearing trees be selected, be made in themselves a source of profit to the farmer, and of health and comfort to grazing animals, from the shade and shelter they afford.

Galvanized wire would be lasting—if not, let black varnish be applied by means of a woollen cloth saturated with it, being once a year used to coat the wires. White and black thorn hedges have been successfully tried in this country, particularly in the States of Delaware and Pennsylvania. The only drawback to their more general adoption that I have heard of, is their liability to destruction from field mice, which shelter themselves among its roots, and devour the bark and so destroy them. The apple shrub, pruned, makes a good hedge, but, like the thorn, is prayed on by mice. The locust, willow, and red cedar, have all been cultivated for hedges. Some of the mulberry trees may be so cultivated, except for inclosing grazing animals, who would prune them too close. Willow does well on low grounds, especially along water courses, where it answers the double purpose of hedge fence and preserving the banks from falling in. Red cedar well pruned, and its limbs interlocked, makes a valuable hedge, and has the advantage of not being *eaten by animals.* In France, fences are sometimes made by beating earth between planks till a solid earth wall is produced, the planks being carried forward to continue the process. The earth so used ought to have clay enough in it to render it cohesive. Houses are so constructed, and when covered over with good mortar, last many years.

Sod fences are made by a double row of sods, with earth between them. Such fences should have shallow ditches on each side, with cuttings of dwarf willows, or planted with the seeds of thorny running vines. Such fences are well adapted for prairie inclosures, and wherever timber is scarce.

EDWARD CLARK.

THE TANNIER, OR ARUM—A NEW ESCULENT.

This valuable plant, I believe, is little known in the United States. I had a present of one some eighteen years ago, which I planted near the mill pond, in a damp soil; it escaped notice for three or four years, until my attention was drawn to it, by the beautiful leaves it produced amidst briars and weeds. On examining the roots, I found they had become numerous, and the first planted much increased in size. I carefully removed them for cultivation, not knowing them valuable for anything more than ornament. The leaf and root were both as hot to the taste as pepper, and on scraping the skin, would cause a smarting of the hands. I found, on boiling the root, a rich vegetable of a chocolate color, resembling in taste deer's marrow. As the roots grew large until last year, they were generally split for boiling as turnips. But finding, under this process, a large amount of glutinous substance they contained mixed with the water, and upon its surface, from which it was necessary frequently to skim it, it was discontinued. When boiled without cutting, and with the skin on, they retained the rich glutinous substance, and when taken from the boiling water, are as the Irish potatoe.

They grow to the depth of four to six feet in rich moist soil, the stalk at the root about two and a half inches in diameter, branching off into many stems, one to one and a half inches broad, forming a leaf from twelve to thirteen inches broad, and from twelve to twenty-four inches long, of a transparent green. They should be planted as Irish potatoes, about two feet wide, in drills, three inches from each other. They will remain in the ground for ten years, increasing their numbers every year, the old root increasing in size, and forming new bulbs, which, in a year, form others. I did not know the value of the tops until last summer; these, when boiled, form a glutinous substance, which hogs eat as freely as boiled cabbage. One acre of rich damp soil will produce 1000 bushels by the second year.

NEEDHAM DAVIS,
Davis' Mills, S. C.

R. T. UNDERHILL, OF CROTON POINT, ON SOWING WHEAT.

SEPTEMBER, 1845.

The wheat crop is so valuable, so intimately connected with the prosperity of not only the agricultural, the manufacturing, mechanical, and commercial interests of the whole country, that we cannot be too well informed on the subject.

Land that has been well manured in a previous crop, such as corn or potatoes, is, with proper plowing and harrowing, very suitable for winter wheat. It is always best that the manure should be applied to the previous crop, particularly if the manure is rank or recently formed, or your wheat will produce too much straw, and be weak and fall down. There are some exceptions to this rule. Bone dust, oily fish, street manure, &c., have often been applied, at the time of sowing, to procure a good crop. A sandy loam, with a good supply of calcareous earth or lime, forms the best soil for wheat. A certain amount of sand or silex, clay and lime, being essential to secure a good crop. When I say that the land should be thoroughly plowed three or four times, and harrowed as often, I am fully aware what is the usual practice, and also of the loss sustained by only one plowing and two harrowings. I do not speak of lands just cleared of the forest, although then the more and better the plowing, the better is the crop, or of the prairie sod just turned over, but of the lands of the old States, long under cultivation. The object in this frequent plowing, is to mix more completely the atmospheric air with the soil: the air contains nitrogen, oxygen, and carbonic acid: these, well mixed with the soil, will insure a great increase of crop; and the thorough pulverizing of the soil, renders it easy for the fine roots to get well rooted before winter sets in, and thus securing it from being winter killed. And this also enables you to pasture sheep and young cattle upon it, in the forepart of November, without any fear of their pulling it up. They will also secure it from the Hessian fly, by eating up the larvæ of that insect.

It is also very important to prepare the seed properly. The most *plump and clean seed* must be obtained. Six shillings or a dollar more per bushel for the best seed, is of no consideration. Take a barrel or a half-hogshead, fill it with brine that will bear an egg—use the old salt from your meat or fish casks, if you have it. The old salt is most readily dissolved. Put in one, two, or three bushels of your seed wheat, mix well with the brine, skim off all the chess, foul seeds, &c. which rise to the top. The brine should cover the seed wheat three inches deep. Stir up the wheat occasionally with a stick; let the wheat be in the brine *three or four hours;* then draw off the brine and lay the wheat on an *inclined surface*, that the brine may all run off; then to each bushel of wheat add three or four quarts of *air slaked lime*, and then rake and shovel the wheat, so that every grain becomes coated with lime, and the grains separated from each other as much as possible. If you have no lime, use *unleached ashes.* You must measure the wheat before you prepare it. You will find it difficult to hold in your hand as much of the prepared wheat as is necessary, owing to its increased bulk. It is therefore better *to sow twice and at right angles.* That is, after the first sowing, sow again across the first sowing. You will thus have it more even, and will sow sufficient seed, which is rarely the case. When you have prepared your land well, then *use plenty of good seed—a virtue rarely practiced in this part of the world!* The object of all this preparation is to destroy all the smutt, (which it does,) and all the eggs of insects. The salt and lime also act as stimulating manures to the grain, and greatly invigorate it in the early stage of its growth.

NORTHAMPTON, Jan. 15, 1846.

T. B. WAKEMAN, Esq.:

While perusing the paper which yon sent me, I was reminded of some facts connected with the settlement of the town of Springfield, about the year 1636, under William Pyncheon, with whom came my ancestor Rowland Stebbins. The first settlers had lands set apart for them. The Stebbins family, among other things, had assigned to them an alluvial tract on Connecticut river, called Three-corner Meadow; this being annually enriched by the overflow of the river, required no manure to yield twenty bushels of corn an acre, and proportionably of rye. This meadow was plowed by running the furrows east and west. Another meadow adjoining was of same quality. A division of the meadows took place, and one piece being narrow, it became necessary to change the direction of the plowing from north and south to east and west. After this change the land did not, for twenty years, possess the same ability to give good crops, although dress ed with manure. The other meadow, plowed from north to south, without manure gave its usual crops. Some fifty or sixty years ago, this circumstance attracted the notice of several intelligent farmers and some well educated men, and they came to the following conclusion, viz:

That where land is plowed east and west, the south sides of the furrows would be thawed by the sun while the north sides remained frozen, thus heaving up and injuring the roots of the rye or other grain on that south side, so injuring the crop. While on furrows lying north and south, the sun acted on both sides alike in the course of a day, the grain was not hurt.

Justus Stebbins tried the enrichment of his land by sowing clover; he had many cattle. He began by sowing three pounds of clover seed on an acre. He observed, that after he had plowed in a clover crop, a cloud of mist like a fog remained over that field for hours after the surrounding fields were clear of dew!

He was pleased with his clover experiments, and went on increasing the quantity of clover seed sown on an acre, till at last he sowed on one acre half a bushel. And that by this means his land became as rich as a garden without any other manure. He tried a field well manured and well dressed without clover, and got forty bushels of corn per acre. While on that field of clover turned in, and which, as the plow did not well cover it, he rolled it well, he had sixty bushels of corn per acre.

The roller is very important to farmers. We have noticed that wherever a sled path has been made over a grain field there the growth was decidedly the best.

D. STEBBINS.

H. MEIGS ON THE DISEASE OF THE POTATO.

You have done me the honor of requesting answers to four questions relative to the disease of the potato. In answer, I will state my impressions as accurately as I can.

Question first.—Were the potatoes in general attacked by a disease which destroyed or impaired the substance of the root in any of the years 1843, 1844, or 1845?

I reply that in each of these years the disease appeared in various fields in the United States. In 1832 my potato field first exhibited evidence of disease in the leaves and stems, which I have often seen since. The leaves first curled up, presenting a grey color which rapidly changed to a darker hue, and without frost or any known cause, prematurely perished. But the potatoes, although a smaller crop than usual, did not shew any disease. That summer was distinguished by the first visit of Asiatic cholera in the United States. It ravaged this city taking off eight or ten thousand persons of all the various ages, sexes and conditions. I then inclined to ascribe the potato disease to the same evil influence, as we are very apt to select always proximate causes. Since that time the disease has appeared in Europe and America, in every variety of soil and climate, in moist and in dry, lowland and upland situations, yet remarkably, in adjacent lands, appearing in one and not in another, very much as was the appearance of Asiatic cholera. I therefore answer that I am at a loss for any specific cause of this disease.

Question second—Did the potatoes, which were sound when dug, remain sound, and were any means of averting the corruption of the root, after it had been taken out of the ground, found effectual?

I reply, that it is established that the starch in potatoes is readily extracted from those diseased as well as from the sound, and that this is the only sure method of preserving the farina. But it is believed that where the diseased potato is placed in contact with lime, the disease is entirely arrested, so that on cooking the diseased potato which has been limed, the diseased part readily separates from the sound part. The experiments of Col. Edward Clark of Brooklyn, in this matter, are satisfactory to me.

Question third.—Was it found that potatoes and other vegetables or grains, planted in ground where diseased potatoes had been grown, were attacked by the same disease?

I reply, that in fields where potatoes have been diseased in one season, those sound ones selected from the diseased crop have been planted in the same field, and have this year yielded sound potatoes. And recently potatoes were exhibited by Mr. Lodge, a gardner of Westchester, of as perfect a character as ever known. And that his method is to till the soil with the most perfect care, making thorough clean work of it, following Tull's theory of deep and constant tilling.

As to the idea of the cause of this disease being telluric, when we consider that soils consists of bases, oxides, salts, constant in their nature and incapable of change in themseves, we must turn our attention to those elements in nature which act upon these bases. If these bases were kept in a dry state, there would be no change in them, it is only when acted upon by other elements that they unite in any vegetable or other product. It is then to the active elements we must look for causes. These are in constant play in the ocean of air, light, gases, electricity, &c. &c. operating upon the surface of the earth, and their effects are found to be for all our purposes confined to about one foot in depth on the earth, that being the average depth of soil.

A singular occurrence has lately been noticed by chemists, that is the presence of *caseine* in diseased potatoes. Caseine is very perishable, whereas starch which constitutes the valuable element of the potato is not so, for it may be extracted pure from rotten potatoes.

Solanin has lately been adverted to. It seems that this poison, of which a trace is always to be found in the *solanum tuberosum* (potato,) is found to be much more abundant in the stalk of potatoes grown in cellars where there is but little light!

Question fourth.—Were any means of preventing the recurrence of the potato disease in successive years found effectual?

I reply, that I have no confidence, for any useful purpose in any of the theories yet published. We all know that there are epidemics occasionally, both in the animal and vegetable kingdom, (if the word may be applied except to people,) which baffle all our knowledge both as to their beginning and end. One truth, however, remains for our consolation, and that is that they are, if periodical, not very lasting. The animals and plants still continue to grow although disastrous interruptions occur in their progression. The original potato still keeps its annual growth in wild places in S. America, sometimes among the wild cacti in barren places, annually yielding its little tuber somewhat of the form and size of a pea-nut, putting forth annually its little seed ball, which again falling to the earth renews the seedling potato from age to age. Perhaps it would be well for us, (as I have long ago suggested,) to procure these wild originals, and by careful culture in our gardens, obtain a new race, which may remain domesticated, and feed us for another period of three centuries. I have sent to South America for them, and hope that the experiment will be fully tried. We have long ago tried seedlings and obtained great varieties. But perhaps the seedling from the domesticated race may not possess the stamina of the wild original which has maintained its character from creation.

Accept, my dear sir, upon this vexed and important question, the answers here given to your four questions. I have said thus much, not having found the *lost genii*, but because I believe that in a *multitude* of seekers it may be found.

I have the honor be, with great esteem and consideration, your obedient servant.

HENRY MEIGS.

(D.)

PREMIUMS

Awarded in the Department of Manufactures and the Arts at the 18th Annual Fair, October, 1845.

ARCHITECTURAL AND MECHANICAL DRAWING.

Frederick Cook, 139 Avenue D, for the best mechanical drawing. *Diploma.*

F. Ransom, 29 Fulton-street, for the second best mechanical drawing. *Diploma.*

William Hall, 113 Chambers-street, for a mechanical drawing. *Diploma.*

J. H. Shepherd, 7 Bleecker-street, for the best perspective, (on stone.) *Diploma.*

J. L. Constable, 91 Amity-street, for the best mechanical drawing, (on stone.) *Diploma.*

M. F. Butler, 31 Hammersley-street, for the best architectural drawing. *Diploma.*

GENTLEMEN'S BOOTS AND SHOES.

W. Jennings, 20 Nassau-street, for the best pair of dress boots. *Silver Medal.*

John Dick, 109 Nassau-street, for a metallic shank for boots. (Silver medal having been before awarded.) *Diploma.*

W. Ferguson, journeyman at John Dick's, 109 Nassau-street, for the best pair of calf skin winter boots, cork soles. (Special premium.) *Silver Medal, and* $5.

James Dent, journeyman at W. Jennings', 20 Nassau-street, for the best pair fancy dress boots, patent leather. (Special premium.) *Silver Medal.*

LADIES' BOOTS AND SHOES.

J. O. Whitehouse, 152 Fulton-street, Brooklyn, for the best cork sole shoes, satin boots, plain and embroidered satin slippers, and summer walking shoes. *Silver Medal.*

P. Laboyteaux, 641 Broadway, for the best winter cork sole boots, second best cork sole shoes, plain and embroidered slippers. *Diploma.*

P. Laboyteaux, 641 Broadway, for a new article of clogs or overshoes. *Silver Medal.*

George Nichols, Stroughburg, Pa., for the best pair of winter boots for ladies. (Special premium.) *Silver Medal, and* $5.

Brushes.

John G. McMurray, 279 Pearl-street, for the best brushes. *Diploma.*

Wilson & Deming, 49 Liberty-street, for a set of dresser brushes. *Diploma.*

Steele & Co., 305 Pearl-street, for feather brushes. *Diploma.*

H. Talcott Case, Boston, Mass., for a case of Manilla grass brushes. *Diploma.*

Cabinet Ware.

Benjamin F. Downs, 40 Forsyth-street, for a carpenter's tool chest, a superior specimen of workmanship. *Silver Medal.*

T. Hollenbeck, 30 Troy-street, for a tool chest. *Diploma.*

Joseph Martin, 167 Third Avenue, for best specimen of inlaying. *Diploma.*

Jacob Steurer, Bloomingdale-road, for cane chair bottoms. *Diploma.*

John Harper, 265 Sixth Avenue, for a ladies' work-box. *Diploma.*

Joseph Bradley, 317 Pearl-street, for an Italian chair. *Diploma.*

H. R. Taylor, Roxbury, Mass., for a patent crib and cradle. *Diploma.*

J. Robinson, 25 Catharine-street, for a mahogany reading stand. *Diploma.*

W. C. Gardiner, 69 Gold-street, for the best principle of a screw bedstead. *Diploma.*

Martin Willard, corner of Mulberry and Chatham-streets, for a patent screw bedstead. *Diploma.*

J. P. Gage, Thirty-seventh-street, corner of Ninth Avenue, Charles Towsley, agent, 215 Bleecker-street, for the best specimens of sand paper. *Diploma.*

J. G. Isham, 71 Fulton-street, for the second best specimen of sand paper. *Diploma.*

Joiners' Work.

Horace Van Gieson, with F. Callaway & Co., Newark, N. J., for an eight panel door of pine. (Special premium.) *Diploma, and* $10.

Carriages, Sleighs, Axles, &c.

Charles Beardsley, 32 Canal-street, for the best light wagon. *Silver Medal.*

S. B. Crossman & Co., Brooklyn, L. I., for the best two seat rockaway. *Silver Medal.*

John H. Wood, Poughkeepsie, Dutchess co., N. Y., for the second best wagon. *Diploma.*

Waterbury & Harvey, Poughkeepsie, Dutchess co., N. Y., for the best one horse sleigh. *Silver Medal.*

Isaac Mix, Jr., 440 Broadway, for the best one horse sleigh, not painted. *Diploma.*

John W. Whitney, Poughkeepsie, Dutchess co., N. Y., for a two horse sleigh. *Silver Medal.*

Bedford & Crane, Newark, N. J., for a bundle of carriage bows. *Diploma.*

Harrison & Breese, Newark, N. J., for a set of patent axles. *Diploma.*

E. S. Scripture, Syracuse, N. Y., for a carriage wheel. *Diploma.*

George Dunn, Newark, N. J., for buggy and sulky railings and dash frames. (Silver medal having been before awarded.) *Diploma.*

CARVING AND GILDING.

William S. Conely, 35 Reade-street, for the best gilding and ornamental framework. *Diploma.*

J. H. Doughty, 361 Grand-street, for the second best carved ornaments. *Diploma.*

C. Ramseyer, 147 Leonard-street, for corner pieces of frames. (For accuracy.) *Diploma.*

CASTINGS.

Jonathan Moore, 3 Dutch-street, for superior cast iron large bronzed umbrella and hat stands, bronzed and gilt fire set and stands. *Diploma.*

Salt & Ritchie, Williamsburgh, L. I., for an iron casting umbrella stand, (for smoothness without filing, varnish, or paint.) *Siver Medal.*

Andrew Meneely, West Troy, N. Y., for the best church, steamboat, and factory bells. *Gold Medal.*

Jordan L. Mott, 264 Water-street, for a cast iron bathing tub, (weight two hundred and forty-five pounds.) *Diploma.*

John Hendricks, Houston-street, for brass door knobs. *Diploma.*

Belden Barnes, corner of Hester and Elizabeth-streets, for brass door knobs. *Diploma.*

Gaspar Godone, 403½ Broadway, for an iron music stand. *Diploma.*

CLOCKS AND WATCHES.

Eggart & Son, 239 Pearl-street, for the best chronometers. *Gold Medal.*

Henry Glover, 5 Wall-street, for the second best chronometers. *Silver Medal.*

Silas B. Terry, Terrysville, Conn., for a patent lever clock, (for its adaptation.) *Silver Medal.*

Victor Giroud, 281 Broadway, for a superior lever escapement clock. *Gold Medal.*

J. R. Mills & Co., 109 Fulton-street, for a year clock. (Silver medal having been before awarded.) *Diploma.*

Cooperage.

Francis Short, 97 Pine-street, for the best wood-bound thirty gallon cask. *Silver Medal, and* $5.

William Norman, Lockport, N. Y., for workmanship on two flour barrels. *Diploma.*

W. Dunn, 32 Old-slip, for a French Quarter cask. *Diploma.*

Ready-made Clothing.

Stilwell & Montross, 2 John-street, and Hadden & Taylor, 69 John-street, for ready-made clothing, no difference being perceptible to the judges. *Diploma to each.*

S. W. Scofield, 38 Bowery, for the best children's clothing. *Diploma.*

Edward J. Olssen, 74 Bowery, for the second best children's clothing. *Diploma.*

George T. Green, 110 Chatham-street, for children's clothing. *Diploma.*

Mrs. Jane Cornwell, 282 Grand-street, for children's clothing. *Diploma.*

Joseph B. Close & Co., 12 Bowery, for children's clothing. *Diploma.*

Confectionary.

Jas. Thompson, 40 Lispenard-street, for ornamental plum cake. *Diploma.*

N. Raynor, 372 Grand-street, for ornamental plum cake. *Diploma.*

Cotton Goods.

James's Steam Mills, Newburyport, Mass., S. J. Beals & Bush, agents, 30 Pine-street, for the best fine bleached cotton goods. *Gold Medal.*

The New-York Mills, Oneida co., N. Y., Charles Carville, agent, 31 Pine-street, for the second best shirtings. *Silver Medal.*

The New-York Mills, Oneida co., N. Y., Charles Carville, agent, 31 Pine-street, for cambric dimity. *Diploma.*

The Ida Mills, Troy, N. Y., Charles Carville, agent, 31 Pine-street, for the best specimens of ginghams. *Gold Medal.*

American Print Works, Fall River, Mass., McCurdy, Aldrich & Spencer, agents, 47 Exchange Place, for the best specimens of prints, beautiful in design, color, and execution. *Gold Medal.*

Benjamin Cozzens, Providence, R. I., Hubbell, Thatcher & Greene, agents, 45 Exchange Place, for the second best specimens of prints, for the beauty and execution of design. *Silver Medal.*

Gregg & Jones, Vaucluse Factory, S. C., Franklin & Harris, agents, 46 Exchange Place, for superior cotton osnaburgs. *Silver Medal.*

Alfred Hyatt, Paterson, N. J., for a specimen of buckram. *Diploma.*

Jacob Dunnell & Co., Providence, R. I., Fearing & Hall, agents, 16 Exchange Place, for printed lawns. *Silver Medal.*

The New-York Mills, Oneida co., N. Y., Charles Carville, agent, 31 Pine-street, for pantaloon stuff. *Diploma.*

Leonard, Hone & Nicoll, 39 Pine-street, for the best cotton yarn. *Silver Medal.*

Burns & Co., Newburgh, N. Y., for the second best cotton yarn. *Diploma.*

Shepard & Son, Taunton, Mass., Holbrook, Nelson & Co., agents, 37 Pine-street, for superior specimens of Canton flannel. *Diploma.*

DAGUERREOTYPE LIKENESSES.

M. B. Brady, corner of Broadway & Fulton-street, and P. Haas, 289 Broadway, for the best daguerreotype likenesses. *Silver Medal to each.*

Langenheim & Beckers, 201 Broadway, for a daguerreotype view of Niagara Falls. *Silver Medal.*

DENTISTRY.

James Alcock, 4 Murray-street, for the best incorruptible teeth. *Gold Medal.*

E. L. Crofoot, Boston, Mass., for superior block teeth. *Silver Medal.*

DIES.

James S. Smith, 139 Fulton-street, for military goods and crests. *Diploma.*

DRUGS AND CHEMICALS.

Atlantic White Lead Company, Brooklyn, Pollen & Colgate, agents, 287 Pearl-street, for the best white lead, dry and in oil. *Silver Medal.*

James H Stokes, Clyde, Wayne co., N. Y., S. N. Dodge, agent, 189 Chatham-street, for the second best white lead. *Diploma.*

Fraser & Co , 48 Centre-street, for superior soda water. *Silver Medal.*

A. W. Rapp, 95 Third Avenue, for superior soda water, with fine flavored syrups. *Silver Medal.*

John Van Deventer, 87 Barclay-street, for the best specimen of blacking. *Diploma.*

D. Oatman & Co., 252 Walker-street, for a specimen of water-proof paste. *Diploma.*

Calvin Gitteau, Syracuse, N. Y., for the best specimen of salt. *Diploma.*

H. W. Starin, Syracuse, N. Y., for the best specimen of table salt. *Diploma.*

Spalding & Co., 161 Bleecker-street, for the best friction matches. *Diploma.*

Richard A. Thorp, 330 Third Avenue, for the best specimen of starch. *Diploma.*

Chas. L. Stickney, 98 Rivington-street, for the best specimen of mustard. *Diploma.*

John Corell & Co., 174 Rivington-street, for a superior specimen of mustard. *Diploma.*

H. C. Hudson, Newark, N. J., for a superior specimen of mustard. *Diploma.*

Joseph E. Hover, Philadelphia, Pa., George F. Nesbitt, agent, corner of Wall and Water-streets, for the best specimen of writing ink. *Diploma.*

H. L. Kendell & Co., Daniel Tibbets, agent, 17 Water-street, for the best sterine candles. *Diploma.*

Josiah Macy & Son, 189 Front-street, for a specimen of purified spermaceti. *Diploma.*

Isaac H. Horton, 135 Attorney-street, for the best specimen of crystalized saltpetre. *Diploma.*

Thompson & Co., 115 Front-street, for the best specimen of salæratus. *Diploma.*

Kissam & Keeler, 110 John-street, for fine varnishes. *Diploma.*

Thomas J. Husband, Philadelphia, Pa., Haviland, Keese & Co., agents, 80 Maiden Lane, for calcined magnesia. *Diploma.*

E. L. Szadeczky, New-York, John G. Gottsberger, agent, 12 Centre-street, for extract of coffee. *Diploma.*

Frederick Griffing, John McNair, agent, 117 Front-street, for extract of logwood. *Diploma.*

M. Hallowes, St. Mary's, Georgia, Stephen Burkhalter, agent, corner of Fulton and Church-streets, for a specimen of arrowroot. *Diploma.*

Jeffries & Catterfield, 39 William-street, for a specimen of refined brimstone. *Diploma.*

William T. Anderson, 192 Broadway, for daguerreotype colors. *Diploma.*

William Taggard, 172 Water-street, for a specimen of fine lamp black. *Diploma.*

P. B. Knapp, 362 Hudson-street, for Knapp's plasters. *Diploma.*

Peter Cooper, New-York, for specimens of isinglass and glue. *Gold Medal.*

John Corell & Co., 174 Rivington-street, for specimens of cocoa and chocolate. *Diploma.*

Artists' Colors.

J. P. Ridner, 56 Varick-street, for chromate of Baryta and oxide of Chromium. *Silver Medal.*

Daniel F. Tieman, 313 Water-street, for Chinese white and Paris green. *Silver Medal.*

Heslewood & Co., 372 Washington-street, for American vermillion. *Silver Medal.*

J. & J. M. Frey, 169 Bleecker-street, for the largest assortment of pigments. *Silver Medal.*

Edge Tools, Cutlery, &c.

Pierpont & Hotchkiss, New-Haven, Conn , J. Danforth, agent, 219 Pearl street, for superior mineral knobs and latches. *Silver Medal.*

M. Palmer, Hudson co., N. J., Leonard B. Bleecker, agent, 319 Pearl street, for patent blind hinges and fastenings. *Diploma.*

J. N. & L. Churchill, New-Haven, Conn., E. O. Sewall, agent, 10 Platt-street, for superior cast steel augers, bitts, &c., *Diploma.*

Solomon Whipple, Albany, for the best specimen of machine cut files. *Silver Medal.*

Robert Murphy, Philadelphia, A. Jones, agent, 343 Broadway, for second best specimen of files. *Diploma.*

Wm. H. H. White, New-Brunswick, N. J., for bench planes. *Diploma.*

J. Merrick, Springfield, Cox & Marshall, agents, 4 Gold-street, for coach wrenches. *Diploma.*

C. Foster & Co., Worcester, Mass., Clark & Wilson, agents, 5 Platt-street, for coach wrenches. *Diploma.*

W. Wheeler, 223 Sullivan-street, for curry-combs. *Silver medal.*

Markham & Clark, East Hampton, Conn., for superior cast steel neck hoes. *Silver medal.*

J. F. Hopkins, Cambridge, Mass., A. B. Allen, agent 187 Water-street, for the best hay and manure forks, and potato forks. *Silver Medal.*

William K. Gates, Lee, Mass., for manure and hay forks, and cast steel hoes. *Diploma.*

J. B. Richards, 43, Eldridge-street, for superior brass and composition faucets. *Silver Medal.*

H. Soffe & Mulliken, 188½ Spring-street, for brass and composition cocks and faucets. *Diploma.*

M. Anderson, New-York, for new and beautifully finished cast steel carpenters' hammers. *Diploma.*

Mathew Van Siclen, corner of Hester and Elizabeth streets, for a cast steel hammer. *Diploma.*

Junius Foster, Norfolk, Conn., for a very fine and useful saw set. *Diploma.*

C. C. Chapman, Philadelphia, Pa., for a flexible jawed vice. *Gold Medal.*

Joseph Goldie, 133 Attorney-street, for excellent iron vices. *Silver Medal.*

F. G. Richardson, 107 John-street, for specimens of wire cloth. *Silver Medal.*

R. Heineisch, Newark, N. J., for the best tailors' shears and scissors. *Gold Medal.*

Leonard & Wendt, 29 Gold-street, for the second best tailors' shears. *Silver Medal.*

Edwin R. Cook, 98 Twelfth-street, for edging knife and carpet stretcher. *Diploma.*

J. Russell & Co., 17 Platt-street, for the best ivory handled knives and forks. *Silver Medal.*

Joseph Goldie, jr., 133 Attorney-street, for well finished miniature anvils and vices. *Diploma.*

George L. Dick, 192 Pearl-street, Brooklyn, for superior horse shoes. *Diploma.*

William Ballard, 97 Eldridge-street, for an excellent jack screw. *Diploma.*

R. Hoe & Co.. 29 and 31 Gold-street, for a beautiful assortment of saws. *Gold Medal.*

John C. Nixon, 91 Nassau-street, for the best specimens of razors. *Silver Medal.*

S. Hollingsworth, for superior circular saw mandrils. *Silver Medal.*

John W. Price, 7 Avenue D, for good specimens of wrought spikes. *Diploma.*

F. W. Widman, Philadelphia, Pa., for very superior swords. *Silver Medal*

Mariot McKinney, Brooklyn, for caulkers' tools. *Diploma.*

George Briggs & Co., 9 Platt-street, for carpenters strapped hammer. *Diploma.*

L. B. Lee & Co, New-Britain, Conn., Mattison, Russel & Co., agents, 82 John-street, for fancy stair rods. *Diploma.*

Engravings.

N. Orr, 11 Spruce-street, for the best wood engraving. *Silver Medal.*

B. F. Pease, 75 Nassau-street, for the second best wood engraving. *Diploma.*

Robert Havell, artist, for the best acquatint engraving, Hooper & Brother, agents, 333 Pearl-street. *Diploma.*

Henry S. Sadd, for the best engraving, (being a combination of mezzotint and line engraving.) *Silver Medal.*

Fine Arts.

Henry Granger, Public School No. 2, for two oil paintings. *Diploma.*

William Jenner, 230 Grand-street, for a landscape painting. *Diploma.*

Louis Boronto, 245 Canal-street, for alabaster models and mosaic work. *Diploma.*

M. Corrie, for the best print coloring. *Diploma.*

J. A. McDougal, 386 Broadway, for the best miniature painting. *Diploma.*

John V. Cornell, 209 Centre-street, for views of steam-boats. *Diploma.*

FIRE ARMS.

John Ehlers, 2 Barclay-street, for the best guns, rifles, pistols and powder flasks. *Silver Medal.*

Blunt & Syms, 44 Chatham-street, for the second best six barrelled revolving pistols and powder flasks. *Diploma.*

John Ehlers, 2 Barclay-street, for revolving and single barrel self-cocking pistols. *Diploma.*

William Jenks, for a patent carbine, made for marine use. *Diploma.*

CUT AND PLAIN GLASS.

M. & T. Sweeney, Wheeling, Va., for the best cut glass; (the shapes and cutting superior to any exhibited,) including a very splendie vase. *Gold Medal.*

Brooklyn Flint Glass Co., Peter Morton, agent, 129 Water-street, for fine specimens of cut glass, (the best metal for color exhibited,) and two gilt jars. *Silver Medal.*

Berger & Walter, Williamsburgh, L. I., for fine specimens of colored glass. *Silver Medal.*

Stone & Burwell, 13 Platt-street, for druggists' glass ware, (very superior in form and shape.) *Diploma.*

John Levy, 13 Clinton-street, for specimens of ground and cut sash glass. *Diploma.*

Solon Robinson, Lake Co., Indiana, for superior specimens of porcelain clay. *Diploma.*

WINDOW GLASS.

Coffin, Day & Bondle, Winslow, N. J., Schenck & Downing, agents, 108 Fulton-street, for American clyinder glass. *Diploma.*

James H. Stokes, Clyde, Wayne Co., N. Y., S. N. Dodge, agent, 189 Chatham Square, for crown window glass. *Diploma.*

FUR AND SILK HATS.

E. T. & S. Ryder, 236 Water-street, for the best otter cap. *Silver Medal.*

Broodie & Shackerly, 7 Burling Slip, for the second best fur cap. *Diploma.*

Orlando Fish, 137 Broadway, for the best fur hat. *Silver Medal.*

John N. Genin, 214 Broadway, for the second best fur hat. *Diploma.*

John N. Genin, 214 Broadway, for the best silk hat. *Silver Medal.*

Orlando Fish, 137 Broadway, for the second best silk hat. *Diploma.*

John N. Genin, 214 Broadway, for the best cloth and fancy caps. *Diploma.*

STRAW AND NEAPOLITAN HATS.

Pattison, Noe & Co., 25 Nassau street, for the best Neapolitan bonnets. *Silver Medal.*

C. M. Stone, 228 Sixth Avenue, for the second best Neapolitan bonnets. *Diploma.*

John Sammis, 86 Delancey street, for the excelsior bonnet, (a new article, made entirely of raw silk.) *Gold Medal.*

Mrs. Horace Richardson, Medway, Mass., for a fine split straw bonnet. *Silver Medal.*

HEMP, &c.

H. Van Phul & Co., St. Louis, Mo., for a sample of hemp. *Silver Medal.*

Beardsley & Chalmers, 246 Pearl street, for flax thread. *Diploma.*

American Hemp Co. Paterson, N. J., for sail duck. *Diploma.*

John Breed & Son, Norwich, Conn., J. S. Watkinson, agent, 21 Platt street, for cotton lines. *Diploma.*

HOUSEHOLD UTENSILS.

John M. Smith, 185 Church street, for the best refrigerator. *Diploma.*

Whittemore & Torrey, 45 Maiden lane, for the best shower bath. *Silver Medal.*

John Locke, 31 Ann street, for an improved shower bath. *Diploma.*

Burnett & Laemy, 74 Bleecker street, for a shower bath and fixtures for Croton water. *Diploma*

W. Taylor, 510 Grand street, for the best cedar striped pails. *Diploma.*

M. T. Baxter, 225 Fulton street, for the second best cedar striped pails. *Diploma.*

William Taylor, 510 Grand street, for a plain brass bound pail. *Diploma.*

H. W. Dixon & Co., 179 Sixth Avenue, for brass kettles. *Diploma.*

Mathew Gormly, 257 Spring street, for a copper kettle. *Diploma.*

John S. Gibbs, 277 Pearl street, for four sheep skin mats. *Diploma.*

Lee & Co., Broadway, for the best wire fire screens. *Diploma.*

Henry Babcock, Brooklyn, for a bird cage. *Diploma.*

Albert C. Williams, 107 John street, for three bird cages. *Diploma.*

INDIA RUBBER GOODS.

Hutchinson & Runyon, 53 Maiden Lane, for best specimen of India rubber shirred goods and suspenders. *Silver Medal.*

H. H. Day, 25 Maiden Lane, for best specimen of embroidered shirred suspenders. *Diploma.*

H. H. Day, 25 Maiden Lane, for India rubber life preservers for ladies. *Diploma.*

Charles Goodyear, New Haven, Conn., for India rubber maps. *Diploma.*

S. J. Lewis, Boston, Mass., for India rubber machine belting.—(Goodyear's patent.) *Diploma.*

C. McBurney, Boston, Mass., for India rubber trunk, valise and saddle. (Goodyear's patent.) *Diploma.*

E. M. Chaffer, for India rubber patent leather. (Goodyear's patent.) *Diploma.*

George Beecher, 100 Broadway, for India rubber cloths and fire buckets. (Goodyear's patent.) *Diploma.*

Naugatuck Co., Conn., T. Lewis, agent, for India rubber carpet. (Goodyear's patent.) *Diploma.*

H. H. Day, 25 Maiden Lane, for best India rubber shoes. *Silver Medal.*

Robert Webber, 467 Broadway, for second best India rubber shoes. *Diploma.*

N. Hayward, Norwich, Conn., for the best metallic India rubber shoes. *Diploma.*

Naugatuck Co., Conn., T. Lewis, agent, for the second best metallic India rubber shoes. *Diploma.*

Rod and Sheet Iron.

E. Peck & Son, Sampsondale Iron Works, for the best American sheet iron. *Gold Medal.*

Ulster Iron Co., Joseph Tuckerman, agent, 69 West street, for the best hoop, rod and band iron. *Silver Medal.*

New-Jersey Iron Works, Sherman Atwater & Co., agents, 54 Fulton street, for the second best sheet and band iron. *Silver Medal.*

Jewelry and Watch Cases.

Squire & Brother, 182 Bowery, for the best exhibition of jewelry and watch cases. *Silver Medal.*

S. W. Benedict, 5 Wall street, for the second best watch cases. *Diploma.*

Lamps and Chandeliers.

Couthouy & Nevers, 341 Broadway, for the best workmanship and color on an ormolu candelabrum. *Gold Medal.*

Cornelius & Co., Philadelphia, Penn., Woram & Haughwout, agents, 561 Broadway, for the best six light silvered gas chandelier (head border pattern,) superior taste, workmanship and color. *Gold Medal*

Roberts & Eagles, Newark, N. J., for superior coach lamps. *Diploma.*

James G. Moffat, 121 Prince street, for silvered girandoles. *Diploma.*

Israel Jennings & Charles Starr, jr., for camphene lamps. *Silver Medal.*

Leather.

A. H. Brake, 27 Ferry street, for the best wax calf skins. *Silver Medal.*

Darwin N. Edson, Olive, N. Y., G. Lee Knapp & Palen, agents, 10 Jacob street, for the best sole leather buts or pieces : *diploma.*

George Evans, 55 Frankfort street, for the best hose leather : *silver medal.*

Leonard, Hone & Nicoll, 30 Pine street, for band leather : *diploma.*

Jesse H. Ludlum, 146 Wooster street, for hose : *diploma.*

J. S. Schoonover & C. Klein, Mystic, Conn., for the second best wax calf skins : *diploma.*

Horace P. Graves, 156 Seventeenth street, for leather binding: *diploma.*

Adam Smith, 47½ Frankfort street, for morocco : *diploma.*

Locks, Door Springs, &c.

Day & Newell, 589 Broadway, for the best house and store door locks : *silver medal.*

T. L. Littlefield, Philadelphia, for the second best patent door locks : *diploma.*

George Oates, Charleston, S. C., for a patent twin lock : *diploma.*

Lewis Lawrence, New-Haven, Conn., for a patent door spring : *diploma.*

Rodolphus Kinsley, Springfield, Mass., for combined locks and latches : *diploma.*

A. C. Hobbs, 15 Platt street, for best patent clasp locks and glass knobs : *silver medal.*

Hicks Manufacturing Co., John Harmon, agent, 55 Frankfort street, for best brass and plated metal door knobs, plates, &c. : *diploma.*

George W. Jackson, 143 Fulton street, Brooklyn, for specimens of plated knobs : *diploma.*

William Van Brunt, 450 Broome street, for specimens of plated knobs : *diploma.*

Ames & Russell, Middletown, Conn., for plated knobs : *diploma*

Mathematical and Philosophical Instruments.

Henry Fitz, jr., 153 Delancey street, for a superior refracting telescope : *gold medal.*

Jordan L. Mott, 264 Water street, for ventilating cowls. (Gold Medal awarded last year.) *Diploma.*

Brown & Ayres, 83 Fulton street, for superior bank scales : *silver medal.*

Mrs. Sarah P. Mather, Brooklyn, L. I., for a model of a sub-marine telescope. *Silver Medal.*

G. C. Wessman, 107 Third Avenue, for a barometer. *Diploma.*

William Jones, Hammersly street, for his patience, perseverance, and ingenuity in constructing an astral chronometer. *Silver Medal.*

George D. Varney, Newbury, Mass., for a protracting circumferenter, (a great improvement.) *Silver Medal.*

S. B. Smith, 115 Chambers street, for an electro-magnetic machine. *Silver Medal.*

B. Pike, Jr , 294 Broadway, for an electro-magnetic machine. *Diploma.*

Jonas Humbert, Jr., 308 Bowery, for an electro-magnetic machine. *Diploma.*

B. Pike, Jr., 294 Broadway, for a galvanic battery and apparatus for decomposing water. *Silver Medal.*

E. L. Avery, 110 Forsyth street, for a galvanic battery and apparatus for decomposing water. *Diploma.*

Aaron Palmer, Brockport, N. Y., for a computing scale. *Diploma.*

James Rogers, 410½ Broadway, for a steam barometer. *Diploma.*

H. M. Watkins, 35 Christie street, for a brass air pump. *Diploma.*

W. H. Jennison, corner of Franklin street and Broadway, for the diaphragm felter, remarkable for its simplicity. *Gold Medal.*

MUSICAL INSTRUMENTS.

C. G. Christman, 404 Pearl street, for the best exhibition of musical instruments, consisting of flutes, clarionets, and guitars. *Silver Medal.*

NAVAL ARCHITECTURE.

Francis Grice, Navy Yard, Brooklyn, for the best specimen of naval architecture. *Silver Medal.*

To the steamboat Oregon. *Gold Medal.*

George Newman, 29 Peck slip, for a twenty-two foot race boat. *Diploma.*

John Letts, 74 Water street, for a twenty-two foot race boat. *Diploma.*

Philip T. Shaw, Baltimore, Md., for a patent ship steering wheel. *Diploma.*

Tucker, Cooper & Co., New-York, for a coil of rope, made from Kentucky hemp. *Silver Medal.*

John Thursby, Bushwick, for two coils of cordage. *Silver Medal.*

NEEDLE-WORK, EMBROIDERY, AND FANCY ARTICLES.

D. W. Canfield, 2½ Maiden Lane, for the best ready-made linen. *Silver Medal.*

Charles B. Brower, Brooklyn, for the second best ready-made linen. *Diploma.*

Mrs. David Russell, Burlington, Vt., for a pair of knit silk stockings. *Diploma.*

Mrs. L. M. Van Eps, 19 Stanton street, for a pair of domestic silk stockings. *Diploma.*

Mrs. Lydia H. Sigourney, Hartford, Conn., for domestic silk stockings. *Diploma.*

Mrs. S. H. Peshine, 284 Mulberry street, for the best table linen. *Diploma.*

Mrs. Sarah Smith, Morristown, N. J., for the second best table linen. *Diploma.*

Misses Dugan, 218½ Bowery, for the best millinery. *Silver Medal.*

Babcock & Co., 299½ Broadway, for the second best millinery. *Diploma.*

Misses J. C. & M. A. Johnson, 353 Bowery, for the best specimen of dress-making. *Silver Medal.*

E. Bradbrook, 297 Broadway, for the best infants' clothing. *Diploma.*

Mrs. Mary Bradley, Utica, N. Y., for the best embroidered quilt. *Silver Medal.*

Miss Mary Murray, 225 Broome street, for the second best quilt. *Diploma.*

Miss Violet Mullan, 11 Wall street, for a quilt. *Diploma.*

Mrs. Margaret Clark, 107 Greene street, for a knit quilt. *Diploma.*

Franklin K. Smith, Brooklyn, L. I., for a quilt. *Diploma.*

Mrs. Gray, 31 Third Avenue, for a hearth rug. *Diploma.*

Miss E. S. Wright, 168 Bowery, for the best common corsets, and best strap and riding corsets. *Diploma.*

L. Duhain, 128 Fulton street, for military and ladies' feathers. *Diploma.*

W. J. Ross & Co., 17 Jersey street, for the best specimens of cleaned gloves. *Diploma.*

Mrs. Deitz, 427 Broadway, for specimens of laces and hose, (cleaned by steam.) *Diploma.*

Josiah Holbrook, 365 Broome street, for geometrical solids. *Diploma.*

Mrs. B. R. Voorhees, Amsterdam, N. Y., for specimens of domestic manufactures. (Gold medal having been before awarded.) *Diploma.*

Miss Almira Mills, 1 Wooster street, for best specimens of worsted embroidery on canvass. *Diploma.*

Cornelia S. Anderson, 264 Bowery, for the best screens, worsted embroidery on perforated paper. *Diploma.*

Mrs. S. E. Briggs, Fishkill, N. Y., for best raised worsted work lamp mats. *Diploma.*

Mrs. Rebecca Miles, 103 Division street, for the best tufted worsted work, *Diploma.*

Miss Matilda Skinner, Lansingburgh, N. Y., for the best worsted embroidery on broadcloth. *Diploma.*

Mrs. S. I. Cohen, 141 Eighth Avenue, for the best worsted flowers. *Diploma.*

Miss Campbell, 457 Houston street, for the best mosaic work. *Diploma.*

Miss Helen F. Hirley, 9 Harrison street, for the best chenille embroidery, on fire screen and pair of ottomans. *Silver Medal.*

Miss Mary Winney, Albany, N. Y., for the best needle-work embroidery on linen cambric. *Diploma.*

Mrs. Jane Meakins, 43 Orchard street, for the best silk embroidery. *Diploma.*

Mrs. Demarest, 107 Thompson street, for the best crape flowers. *Diploma.*

Mrs. Medina, Newark, N. J., for the best specimens of shell work. *Diploma.*

Christiana Wallis, 169 Spring street, for best specimens of hair flowers. *Diploma.*

Frederick W. Leeds, 134 Hammersley street, for an ingenious and elaborate specimen of needle-work, (by an improved process.) *Silver Medal.*

The New-York Institution for the Blind, for specimens of various fancy articles. *Diploma.*

Mrs. Leah Davidson, Plainfield, N. J , for specimens of thread lace. *Diploma.*

Miss Jane Lowe, 514 Grand street, for the best fancy bag. *Diploma.*

OIL CLOTH.

New-Jersey Floor Cloth Manufacturing Co., Elizabethtown, for specimens of oil cloth. *Diploma.*

Sparkman & Kelsey, 251 Broadway, for beautiful designs on floor cloths. *Diploma.*

PRINTED BOOKS, PAPER, STATIONERY, &C.

Henry Murphy, 98 Gold street, for an ornamental book, the best specimen of binding. *Silver Medal.*

Leonard S. Ballou, 15 Spruce street, for a specimen of morocco binding. *Diploma.*

Edward G. Taylor, 128 Fulton street, for a case of books. *Diploma.*

J. K. Park, corner of Pearl and Platt streets, for the best manifold writers. *Silver Medal.*

Francis & Loutrel, 77 Maiden Lane, for the second best manifold writers. *Diploma.*

R. C. Root & Co., corner of Wall and Pearl streets, for the best blank books. *Silver Medal.*

Francis & Loutrel, 77 Maiden Lane, for the second best blank books. *Diploma.*

Richard Smyth, 325 Front street, for superior parchment and vellum. *Silver Medal.*

P. Hogan, 9 Thames street, for excellent ruling pens. *Diploma.*

Wm. B. Weiss & Henry Morrow, (apprentices to John Windt,) for an excellent specimen of wood cut printing, *Silver medal.*

George F. Nesbitt, Tontine Buildings, Wall street, for superior machine cut wood type. (Silver medal before awarded,) *Diploma.*

Green Brook Mills, New-Jersey, Longbotham & Co., 8 Liberty street, manufacturers, for the best binder's boards. *Silver medal.*

George L. Wright, South Hadley Falls, for a paper ruling machine. *Silver medal.*

PENMANSHIP.

William C, Hoogland, Brooklyn, L. I., for specimens of penmanship. *Diploma.*

J. Orville Olds, 190 West Broadway, for a system of penmanship. *Diploma.*

GOLD AND STEEL PENS.

Levi Brown, 61 Nassau street, Brooklyn, for the best gold pens. *Silver medal.*

A. G. Bagley, 189 Broadway, for the second best gold pens. *Diploma.*

C. C. Wright & Co., 2 Barclay street, for the best steel pens. (Silver medal before awarded.) *Diploma.*

PERFUMERY.

Eugene Roussell, Philadelphia, for the best assortment of perfumery. *Gold medal.*

Henry T. Lloyd, 3 Prince street, for the second best assortment of perfumery. *Silver medal.*

Hastings & Co. 334 Broadway, for the best specimens of transparent soap. *Diploma.*

C. Van Schoonhoven, 5 Courtlandt street, for walnut oil shaving soap. *Diploma.*

Holt & Horn, 113 Sullivan street, for specimens of soap. *Diploma.*

Charles H. Ring, 392 Broome street, for shaving cream. *Diploma.*

PIANO FORTES AND ORGANS.

Daniel Walker, 411 Broadway, for a semi-grand piano forte. *Gold medal.*

George Hews, Boston, Mass., for the best square piano forte. *Silver medal.*

George Jardine, Anthony street, for an organ. (Silver medal before awarded.) *Diploma.*

L. Ricketts, Baltimore, Md., for a new method of stringing pianos, to keep them in tune. *Silver medal.*

PINS AND NEEDLES.

Browning & Loomis, Mattewan, Fishkill Landing, for pins. *Diploma.*

Henry Essex & Co., Newark, N. J., L. B. Kirby, agent, 47 Cedar street, for needles. *Diploma.*

PREPARATIONS OF NATURAL HISTORY.

John G. Bell, 289 Broadway, for the best preserved birds. *Silver medal.*

I. Akhurst, Brooklyn, for the second best preserved birds. *Diploma.*

John Gray, 119 Bowery, for artificial birds' eyes. *Diploma.*

John I. Alston, 1 Park Row, for preserved birds. *Diploma.*

N. P. Irving, 97 Thirteenth street, for preserved insects. *Diploma.*

PYROTECHNY.

Isaac Edge, jr., Jersey City, for the best display of firework. *Gold medal.*

SADDLERY, HARNESS AND TRUNKS.

Samuel Post, corner of Broadway and Murray streets, for the best side-saddles. *Silver medal.*

F. L. Cortelyou, 708 Broadway, for the second best side-saddle. *Diploma.*

James Craven, 32 Canal-street, for a double harness. *Diploma.*

J. & J. Collins, 84 Bleecker-street, for a single harness. *Diploma.*

William H. Wilson, 153 Bowery, for a cart saddle. *Siver Medal.*

P. H. Vanherhoef, 190 Allen-street, for a pair of cart hains. *Diploma.*

J. T. Perry, 187 Eldridge-street, for a pair of cart bearing chains. *Diploma.*

S. Wilson, Dansville, Livingston co., N. Y., for a creasing machine. *Silver Medal.*

SIGN PAINTING AND IMITATIONS.

Ackerman & Miller, 101 Nassau-street for the best sign and ornamental banner painting. *Silver medal.*

R. L. Weed, corner of Burling Slip and Pearl street, for the second best sign painting. *Diploma.*

Quaterman & Co., 18 Burling Slip, for the best imitation of wood. *Silver medal.*

Frederick Down, 170 Canal street, for the second best imitation of wood and marble. *Diploma.*

A. C. Hyatt, 118 Varick street, for sign painting. *Diploma.*

SILVER WARE.

Ball, Tompkins & Black, 181 Broadway, for the best specimen of silver ware. *Gold medal.*

F. W. Cooper, 102 Reade street, for a silver castor. *Diploma.*

William Adams, White-street, for a silver vase. *Silver medal.*

STOVES, GRATES AND RANGES.

Shepard & Co., 242 Water street, for the best church, hall and store stoves. *Silver medal.*

Seymour & Williams, 246 Water street, for the second best church, hall and store stoves. *Diploma.*

Thompson & Munsell, 115 Beekman street:
Jordan L. Mott, 264 Water street:
Seymour & Williams, 246 Water street:
McPherson & Guest, 233½ Water street:
Almond D. Fisk, 209 Water street:
For the best cooking stoves, of equal merit. *Diploma to each.*

Hickok & Co. 250 Water street:
Smith, Lockwood & Co., Troy, N. Y., and
E. W. M. Savage, 248 Water street:
For the second best cooking stoves, of equal merit. *Diploma to each.*

James Wilson, 248 Water street, for a ship's caboose. *Silver medal.*

George Pierce, 292 Broadway:
Jordan L. Mott, 264 Water street:
E. Barrows, 243 Water street:
G. Fox & Co., 120 Fulton street, and
Lockwood & Tims, 642 Broadway:
For the best cooking ranges, of equal merit. *Diploma to each.*

Charles Pitt & Son, 17 Third Avenue, and
George F. Merklee, 17 Bleecker-street:
For the second best cooking ranges, of equal merit. *Diploma to each.*

E. Barrows, 243 Water street, and
G. Fox & Co., 120 Fulton street:
For the best hot air furnaces, of equal merit. *Diploma to each.*

George Walker, 293 Broadway, for the second best hot air furnace. *Diploma.*

D. Lockwood, 642 Broadway, for the best laundry range. *Diploma.*

George F. Merklee, 77 Bleecker street, for the second best laundry range. *Diploma.*

Jordan L. Mott, 264 Water street, for an agricultural boiler. *Diploma.*

Almond D. Fisk, 209 Water street, for the best air-tight coal stove. *Silver medal.*

Jordan L. Mott, 264 Water street, for the best cast iron office stove. *Diploma.*

W. & N. Jackson, 238 Front street, for a beautiful specimen of parlor grates. *Silver medal.*

S. Eddy, at James L. Jackson's foundry, Stanton street, for a beautiful grate fender. *Diploma.*

FIRE BRICK.

Forbes & Benton, Perth Amboy, N. J., for the best fire brick. *Silver medal.*

Krerscher & Mumpeton 62 Goerck street, for the second best fire brick. *Diploma.*

SURGICAL INSTRUMENTS.

J. Parker, Mass., J. D. Poillen, 12 Elizabeth street, for a syringe. *Diploma.*

Jordan L. Mott, 264 Water street, for cast iron school chairs. (Important invention.) *Diploma.*

John Busteed, 331 Third Avenue, for a horse and cattle fleam. *Diploma.*

Stephen Bates, Boston, Mass., Benjamin Blagge, agent, 562 Broadway, for a superior vapour bath. *Silver Medal.*

J. H. Ross, 28 Amity street, for an improved vapor bath. *Diploma.*

E. Depuy, 581 Broadway, for ivory nipple shields. *Diploma.*

Oliver Halsted, 22 Nassau street, for exercising chairs. *Gold Medal.*

Joseph Peckover, 240 Water street, for infants' exercising chairs. *Diploma.*

James Elliott, Newark, N. J., for a patent spring exerciser. *Diploma.*

J. R. Benjamin, 13 Beekman street, for the best trusses. *Silver Medal.*

Josiah Hungerford, Dover, Dutchess county, N. Y., for trusses. *Diploma.*

J. D. Chevalier, 284 Broadway, for superior dental instruments. *Silver Medal.*

Joel H. Ross, 28 Amity street, for an exercising swing. *Diploma.*

STEAM ENGINES, MACHINERY, AND MODELS.

George W. Wicks, 241 Delancey street, for the best model of a steam engine. *Silver Medal.*

Thomas M. Wigham, 316 Broome street, for the second best model of a steam engine. *Diploma.*

H. Baldwin, Washington, Conn., for the best water wheel regulator. *Silver Medal.*

N. Scholfield, Norwich, Conn., for the second best water wheel regulator. *Diploma.*

Thomas Hazzard, Brooklyn, N. Y., for the best model of a bridge. *Silver Medal.*

George W. Thayer, Springfield, Mass., for the second best model of a bridge. *Diploma.*

Nathaniel Rider, Worcester county, Mass., for a wrought iron suspension bridge. *Silver Medal.*

R. Hoe & Co., 29 and 31 Gold street, for the best card printing press. *Diploma.*

William Applegate, 17 Ann street, for the second best printing press. *Diploma.*

David Jacobus, 138 Wooster street, for a mortising machine. *Diploma.*

B. Nichols, Newark, N. J., for a mortising and tenoning machine. *Diploma.*

James Bogardus, corner of Pike street and East Broadway, for an eccentric mill. (Gold medal having been before awarded.) *Silver Medal.*

Charles Ross, Eighth street, for a portable grist mill. *Silver Medal.*

Prentice & Page, 24 Mercer street, for a portable grist mill. *Silver Medal.*

Frederick J. Austin, 31 Ann street, for a paper cutting machine. *Silver Medal.*

S. W. Bullock, 27 Peck Slip, for a model of a press for compressing cotton. *Silver Medal.*

B. Sheridan, 29 Ann street, for an embossing press. *Silver Medal.*

Mrs. Mary Ann Kells, Morristown, N. J., for a washing machine. *Silver Medal.*

E. Lukens, Baltimore, Md., for a washing machine. *Diploma.*

Fowler M. Ray, New-York, for a self-equalising truck for railroads. *Gold Medal.*

William Platt, Waterford, N. Y., for a scroll chuck for lathes. *Silver Medal.*

John Johnson, 115 East Broadway, for an improved throstle spinning machine. *Gold Medal.*

Thaddeus Selleck, 11 Reade street, for a machine for cutting saw teeth. *Silver Medal.*

Daniel Howell, 29 Hammond street, for a tanning machine. (Silver medal awarded last year.) *Diploma.*

S. J. Gold, Troy, N. Y., for iron banding for machinery. *Gold Medal.*

Chauncey Andrews, Patterson, N. J., for an elevating water wheel. (Silver medal having been before awarded.) *Diploma.*

Tappin Reeves, Brooklyn, for a standing press. *Diploma.*

John Vesey, Brooklyn, N. Y., for an improved silk engine. *Silver Medal.*

Force, Green & Co., Mangin street, for an iron tubelar steam boiler. *Silver Medal.*

Clinton Roosevelt, 23 Chambers street, for a model of a sub-marine explorer. *Silver Medal.*

James Lightbody, Jersey City, N. J., for a Brussels carpet machine. *Diploma.*

Hiram Parker, corner of Fourteenth street and Sixth Avenue, for a spoke machine. *Diploma.*

G. A. Nicolls, Reading, Pa., for a safety switch for railroads. *Silver Medal.*

Eliphalet S. Scripture, Syracuse, N. Y., for a patent oil can. *Diploma.*

James Wickersham, Pittsburgh, Pa., for a patent bedstead fastener. *Silver Medal.*

H. R. Wilson, Brooklyn, L. I., for a planing machine. *Diploma.*

William McLellan, 429 Houston street, for a model of a meat chopper. *Diploma.*

H. Richardson, 228 Houston street, for a patent window fastener. *Silver Medal.*

William Farrell, New-York, Belden & Rodman, agents, 103 Murray street, for a fire proof grate bar. *Diploma.*

G. Hotchkiss, Broome county, N. Y., for a vertical water wheel. (Silver medal awarded last year.) *Diploma.*

John H. Shyers, 166 Ludlow street, for a model of a trip hammer to be propelled by water power. *Silver Medal.*

G. W. Taylor, for his diving bell and sub-marine apparatus. *Gold Medal.*

L. E. Hopkins, 2 Willet street, for a cut off valve. *Silver Medal.*

Simon Pettes, Schenectady, N. Y., for a machine for boring and drilling rocks. *Silver Medal.*

Ephraim Morris, for a steam hoisting machine. *Silver Medal.*

Mrs A. Fielding, 235 Bowery, for specimens of weavers' reeds. *Diploma.*

A. L. Evans & Co , North Adams, Mass., for specimens of weavers' harness. *Diploma.*

TOBACCO AND ITS MANUFACTURES.

John Anderson & Co., for superior tobacco and snuff. *Diploma.*

John W. Ducasse, 238 1-2 Greenwich street, for specimens of segars. *Diploma.*

UMBRELLAS.

C. C. Wright & Co , New-York, for the best silk umbrellas. *Silver Medal.*

WOOD AND IVORY TURNING.

James A. Calhoun, Rahway, N. J., for the best wood and ivory turning. *Diploma.*

John H. Mead, 41 Hester street, for the second best wood and ivory turning. *Diploma.*

S. C. Harrison, 145 Sixteenth street, for a handsome specimen of turning. *Diploma.*

S. M. Risley, 278 Fifth street, for wooden knobs. *Diploma.*

Orlando D. McClain, 149 Spring street, for turned handles. *Diploma.*

A. McBurth, 355 Fifth street, for inlaid work. *Silver Medal.*

WOOLLEN GOODS.

Welcome Farnum, Waterford, Mass., Fearing & Hall, agents, 16 Exchange Place, for the best fancy cassimeres and wool-dyed black cloth. *Gold Medal.*

Middlesex Manufacturing Co., Lowell, Mass., Wolcott & Slade, agents, 63 Pine street, for the best plain cassimeres. *Silver Medal.*

Gilbert & Stevens, Ware, Mass., Post, Thomas & Dale, agents, 16 Exchange Place, for the second best fancy cassimeres *Silver Medal.*

The Middlesex Manufacturing Company, Lowell, Mass., Wolcott & Slade, agents, 63 Pine street, for the second best plain cassimeres. *Diploma.*

Wethered Brothers, Boston, Mass, Samuel J. Beals & Bush, agents, 30 Pine street, for fancy cassimeres. *Diploma.*

Gilbert & Stevens, Ware, Mass., Post, Thomas & Dale, agents, 16 Exchange Place, for fancy cloakings and flannels. *Diploma.*

Edward Harris, Woonsocket Falls, R. I., Richards & Cronkite, agents, 9 Pine street, for fancy cassimeres and tweeds. *Diploma.*

Jacob Dunnel & Co., Providence, R. I., Fearing & Hall, agents, 16 Exchange Place, for mouslin de laines. *Silver Medal.*

Duncan & Cunningham, Belleville, N. J., Richardson & Watson, agents, 43 Exchange Place, for silk embroidered shawls, and embossed table covers. *Silver Medal.*

John Graham, Little Falls, N. J., S. J., Beals & Bush, agents, 30 Pine sireet, for blankets. *Diploma.*

MISCELLANEOUS.

J. L. Caulkins, 54 Nassau street, for walking canes. *Diploma.*

John Conroy, 52 Fulton street, for the best fishing tackle. *Diploma.*

John J. Brown, 22 Fulton street, for the second best fishing tackle. *Diploma.*

John Frazer, 240 Green street, for a door pad. *Diploma.*

Bacon & Rich, St. Louis, Mo., for a fire ladder. *Diploma.*

J. B. Carey & Co., 34 Beekman street, for a good specimen of show cards. *Diploma.*

Joseph Francis, 89 Nassau street, for nautilus life preservers. (A gold medal before awarded.) *Diploma.*

E. Kirk, 505 Greenwich street, for specimens of anthracite ware. *Diploma.*

Harned & Elliott, Philadelphia, Pa., for an excellent specimen of tin work: (a sphere.) *Diploma.*

E. D. Delamater, 193 Ninth street, for a window sash and blind. *Diploma.*

Charles Thomas, 88 Pearl street, for a tortoise shell comb. *Diploma.*

D. S. & S. S. Mills, Gloversville, Fulton county, N. Y., L. F. Hough, agent, 143 Grand street, for a specimen of buck skin glove. *Diploma.*

John Ramppen, 113 Elm street, for a fireman's cap. *Diploma.*

F. Barnett & Son, 152 Broadway, for superior specimens of morocco goods. *Diploma.*

Thomas C. Bartine, 92 Vesey street, for farmers' baskets. *Diploma.*

S. H. Rowan, 692 Broadway, for palm leaf baskets, (strongly made.) *Diploma.*

Cornell & Jackson, 199 Centre street, for an iron rocking chair. *Diploma.*

(E.)

PROCEEDINGS

Of the National Convention of Farmers, Gardeners, and Silk Culturists, on the 9th, 10th, and 11th days of October, 1845.

New-York, Oct. 10th, 1845.

In pursuance of the following circular letter, addressed by the managers of the 18th annual fair of the American Institute to farmers, gardeners, silk culturists, and others throughout the country, a large number of individuals assembled at the Lyceum of Natural History in this city, on the 9th of October, 1845, at 10 o'clock, A. M.

CIRCULAR.

National Convention of Farmers, Gardeners, and Silk Culturists, and friends of Agriculture generally, resident in all parts of the Union, on the call of the American Institute of the City of New-York.

The American Institute has been prompted to issue this invitation to the farmers, gardeners, and silk culturists of the United States, in conformity to requests contained in resolutions passed at two former conventions, viz: an agricultural and silk convention held in this city, October, 1844, during the 17th annual fair.

It was deemed appropriate, because this Institution was incorporated by the Legislature of New-York, in 1829, expressly to encourage the agriculture of the United States, and so acceptably had this duty been performed in the estimation of the Legislature, that in 1841, when a State agricultural society was formed, this Institute was embraced in it, and constituted the sole representative of that interest in that association, for the city and county of New-York, and was made the recipient of the bounty which in all other parts of the State was apportioned exclusively to the county societies. The city of New-York was preferred for holding this convention, because of its central situation, and the facilities of reaching it by land and water, and the time was designated during the great fair as most convenient and most likely to ensure a full convention, when hundreds of thousands are attracted to the great city, when specimens from the field and the garden, of the highest perfection, from all parts of the country, are spread before the visitors.

The silk convention, which has been for two successive years held separate, will this year be united with the farmers and gardeners convention, and together they will constitute one convention, which will open in the city of New-York, on Thursday, the 9th day of October next, at half-past 10 o'clock, A. M.

It is designed to concert measures which will give a more effective impulse to the efforts of agricultural improvement, by the collection of numerous facts from various localities, and details of experiments, thus affording materials for science to extend its discoveries ; this will impart dignity to the occupation of the agriculturist, elevate it in the comparative scale of human industry proportioned to its inestimable importance. The powers of association, if judiciously brought in aid, will work wonders. Local societies might be formed and kept in continual communication with one great central society, concentrating at one point an accumulation of facts and experience for selection, arrangement, comparison, consideration, and publication, the value of which would exceed all computation. Such an organization should be commenced at this convention. The numerous associations recently formed in various parts of the country, called " farmers clubs," in conjunction with older societies for promoting agriculture, afford the means for a beginning, and the manifest advantages flowing from them, will lead others to follow the example. Practical means for the distribution of the best breeds of cattle, the new and best plants, seeds, &c., farming implements, machines, &c., should be considered. From the isolated condition and infrequency of communication and intercourse among farmers, discoveries of vast benefit to the human race have for long periods remained unenjoyed, because unknown but to a few—the potato, which now feeds millions, and the turnip, that Englishmen assert *saves England*, may be cited as examples. Accident brought the cotton plant into the plantation States, which now afford materials for clothing hundreds of millions. Association will be sure to produce the more speedy development and extended realization of multiplied human comforts, and accelerate the grand march of our national improvement. The examination of specimens, the unceremonious expression of thought, and the interchange of views by the independent and noble lords of our soil, will enable each and all to return to their farms with renewed spirit and increased knowledge.

A full attendance is desired from that portion of our industrious citizens, who seek not only to clothe our own people in silk, but afford commerce a material for other countries. That it is practicable, former conventions have demonstrated—the skill and the improvement requisite, our ingenious fellow citizens are fast acquiring. The proceedings of the two last conventions are replete with facts and accurately detailed experiments, affording the best guides extant for the American silk culturist. We hope to hear from those who contributed to this useful fund of knowledge again, with every experiment noted down to the latest time. Those who cannot come to the convention, are requested to make written communications on any and all subjects appertaining to the objects of the convention.

The premiums generally will be commensurate with our means. The number awarded at the last fair, were

20 Gold medals.
29 Silver cups,
104 Silver medals,
$150 In cash,
444 Diplomas,
120 Vols. of agricultural works.

We are enabled, by the munificence of the Hon. Myndert Van Schaick, of this city, to offer this year, from his donation of $1000, the following special premiums, in addition to the premiums on other silk goods which will be given by the American Institute.

For the best piece of silk stuff, 27 inches in width and 60 yards in length, manufactured in the United States from native silk,	$50 00
For the best and greatest quantity of American silk, uniformly reeled, not less than 50 lbs.	20 00
For the best sewings of any color, made entirely from American silk, not less than 10 lbs.	10 00
For the best pea nut cocoons, not less than 1 bushel,	10 00

And to each of the successful competitors, the "Van Schaick Medal."

Are there not opulent and patriotic gentlemen who will follow the noble example of Mr. Van Schaick?

Washington's favorite Home Department for Agriculture, supported by the purse of the nation, enjoined in almost his last words to Congress, will again be brought before the convention. A department, whose widely extended and intelligent powers might, through our ministers, marshals, charges, consuls, missionaries, and commanders by land and sea, do more in one year for the introduction of new plants and staples, than could by any other means be procured in half a century—thus exhibiting to the world, for the first time in the history of man, the grand spectacle of national power exerting its vast force directly, to multiply and increase human comforts. It is only through the resistless appeals of such a convention as is proposed, that the attention of government can be arrested. Nearly half a century has elapsed since the revered farmer of Mount Vernon—the Father of his Country—raised his voice in favor of such a department. His arguments carried conviction to all. Still, a measure shown by him to be fraught with unmixed good only, has slept to this day. Let those whose sweat and sinews procure the sustenance of our whole people, who never yet have been duly heard, nor represented, meet in one great convention. It would form an agricultural power that could not fail to take a lasting hold on our people and our government.

We invoke the aid of the true friends of agriculture, the wise, the liberal, the intellectual, the patriotic and the noble, who are found among all professions and occupations, and invite delegations from all our numberless associations and clubs. COME to this convention, and unite your energies to carry into effect one of the most beneficent measures ever devised.

ADONIRAM CHANDLER,
EDWARD T. BACKHOUSE,
JOHN CAMPBELL,
JAMES VAN NORDEN,
H. W. CHILDS,
JOSEPH CURTIS,
GEO. ENDICOTT,
WM. HALL,
JOSEPH TORREY,
JAS. R. SMITH,
MARTIN E. THOMPSON,
ISAAC FRYER,
JOHN D. WARD,
EDWARD CLARK,
ROBERT LOVETT,
GURDON J. LEEDS,
A. D. FRYE,
T. B. STILLMAN,
JOSEPH COWDIN,
JAS. J. MAPES,
GEO. F. BARNARD,
C. C. HAVEN,
CHAS. MAPES,
JONATHAN DODGE,
T. W. HARVEY,
T. B. WAKEMAN,
Managers.

New-York, Aug. 1845.

The convention was called to order by Edward Clark, and PETER CRISPELL, of Ulster co., N. Y., chosen chairman;

A. C. Van Epps, of New-York,
James Harrison, of New-Haven, Conn., } Secretaries.

Delegates appeared from the following States:

Maine,
Vermont,
Massachusetts,
Connecticut,
New-York,
New-Jersey,
Pennsylvania,
Delaware,
Virginia,
Mississippi,
Louisiana,
Kentucky,
Indiana,
Illinois,
Texas.

On motion, the following gentlemen were appointed a committee to nominate officers for the convention:

Mahlon Dickerson,
William Pierce,
Edward Clark,
Thomas Afflick,
H. C. Westervelt.

A committee of five was chosen to prepare business for the convention, consisting of

Solon Robinson, Gideon Ross,
J. W. Hays, S. D. Hubbard,
A. Osbourn.

The nominating committee then presented the following report, which was unanimously adopted :

For *President*—James Tallmadge, of New-York.

For *Vice-Presidents*—Mahlon Dickerson, of N. J.; Solon Robinson, of Ind.; Thomas Afflick, of Miss.; C. F. Keller, of Washington City, D. C.; Peter Crispell, of N. Y.; Francis D. Wait, of Delaware; Samuel Church, of Conn.; H. P. Bryan, of Ky.; D. Landreth, of Pa.; Alfred Hennen, of New-Orleans, La.; John S. Pierce, of Vt.; James M. Crane, of Richmond, Va.; J. S. Wright, of Ill.; and Stewart Perry, of Texas.

For *Secretaries*—James Harrison, of Conn., and A. C. Van Epps, of New-York.

On motion, the convention adjourned to meet to-morrow morning at 10 o'clock.

SECOND DAY, Oct. 10th.

At 10 o'clock, A. M., the convention was called to order, and the minutes read and approved—James Tallmadge in the chair.

The chairman of the business committee then presented the following report :

Mr. President, and Gentlemen of the Convention :

Your committee recommend the following order of business for the the action of the convention :

1st. That the letters which have been sent to the convention by the friends of the great cause of improvement, which we have to advocate, should be read, as they contain much interesting matter.

2d. That a list of the States and Territories be called over, and those present requested to answer as the name of the State they represent is called, in order that the convention may know how many of the number of our political confederacy are represented in a convention, the design of which is national.

3d. That any gentleman having communication ready to present in relation either to agriculture, horticulture, or silk culture, be requested to read, or hand it in to be read, for the general information.

4th. That a committee of three be appointed by the president, whose duty it shall be to prepare and submit to the convention, such resolution, and an address, as this convention will see fit to put forth to the world ; which, among other matters of interest to the agricultural portion of the United States, shall urge upon our government to adopt the recommendation of our "Father Washington," before his children grow so old that they forget ever having had such a parent ; who, with the best interests of his children at heart, urged the establishment of a "Home Department," devoted to agriculture in all its branches.

5th. That a standing committee be connected with the Farmers Club in New-York, and a corresponding committee of one in each State and Territory, be appointed to collect information to be laid before future meetings of this convention.

6th. That members from each State be requested to give such information as they may be able, in a condensed form, in answer to the following questions, recommended by a committee of last year's convention :

QUESTIONS.

1. Where the system of improvement has not been adopted, what diminution of crops per acre has taken place in your district, or within your knowledge ?

2. What is the average size of farms in your county ? What proportion is in wood, what arable, what meadow, what exhausted, what at present incapable of tillage, from want of drainage, &c. ?

3. What crops are raised by you, and in your neighborhood ? What average yield is obtained ?

4. What is your method of cultivation ?

5. What is the average quantity of manure obtained from your stock? What quantities, and to what crops do you apply it?

6. Do you use peat, muck, lime, plaster of paris, marl, refuse fish, or any other manures? To what extent, with what success? Please inform the convention how far the system adopted by yourself is carried out by your neighbors, and their success.

7. Do you or your neighbors purchase manures?

8. Are any of the new farming implements used in your district? With what success?

9. Is drainage resorted to?

10. What is the nature of your soil, and the best crops that grow upon it naturally?

11. Have you or your neighbors perceived any very great advantage always to follow the use of any particular manure?

12. Is fallowing green crops common? What crops? What is the improvement?

13. When do you cut grass, or reap oats, rye, wheat, corn, &c.? In the milk, or when dry?

14. Have you or your neighbors seen any great difference in the weight, quality, and sweetness of grain or fodder collected at these different times?

15. Does grain cut in the milk yield whiter and sweeter flour? Has it as much substance as other wheat?

16. What new crops are raised in your district? Is madder, hemp, garden vegetables for the market, corn for sugar, or any other peculiar crop, cultivated by you or within your observation? By what means? What are the profits and prospects?

17. Have experiments been made on the introduction of any new substances?

18. What orchards have you, or are there any in your district? How are they cultivated? With what profits?

19. Are any of the new and improved fruits raised with you? What means do you adopt to destroy insects and caterpillars?

20. What natural manures are to be found near you? Is peat, swamp muck, green sand or shell marl, limestone, plaster of paris, salt, &c.? At what cost are they to be obtained? What is the supply?

21. Are improved cattle, sheep and swine, found in your neighborhood?

22. Is soiling practised? With what advantage and comparative cost?

23. What supply of milk do your cows or those of improved breeds in your district yield? How much butter? What fodder is used?

24. Is cheese made in your county? What food is found best for such produce? What is the nett profit on a given stock?

25. Have you read the recent books on farming?

26. How far, in your opinion, may accurate scientific knowledge form a basis for farming?

27. As far as your experience reaches, is there not some change for the better wanted?

28. Do not those among you who read books and adopt the new plans, improve in their crops and farm management?

29. Are your neighbors and yourself disposed to teach your sons the new facts of farming?

30. Are you willing to sustain agricultural schools?

P. S. Please turn your attention especially to questions 5, 10, 11, 12, 13, 20. We are particularly anxious to learn how far your neighbors are alive to improvements, and ready to countenance them.

7th. That gentlemen be requested to furnish information upon any point relating to the arts, agriculture, or domestic manufactures; not forgetting to give any practicable ideas of the most feasible plan for finding a market for the immense surplus that our country is capable of producing, when science shall be brought to act with the same force upon Agriculture, that it has upon mechanical ingenuity.

Gen. Tallmadge then addressed the convention, in substance as follows:

He said he had been strenuously urged to deliver an address to this convention, which he could not do, as he had not been well, and as he had after eighteen years' service retired from active duty in the good cause. But he would say a few words, as they occurred to him called thus suddenly before the convention.

He alluded to the large proportion of the population of the country engaged in agriculture, and held that it was the fault of that interest if they did not compel their legislators to be favorable to them. What measures were necessary for this, it was the object of this convention to devise. *Production* and a *market* therefor, are the two great subjects which cover the duty of the agricultural interest, and that of the country.

The source of production belongs to the agricultural societies of the land. In this State they abound, and thus there is a regular organization on this subject, for conference and consultation on the sciences connected with agriculture; and the speaker alluded to the great improvement in the means for the development of mind and intellect, as bearing on the point. When you bring science to bear on agriculture, you find a vast field for its exercise; and he dwelt on the value of books on these subjects, as great aids in practical agriculture.

His observations on meteorology, as connected with the general subject of agriculture, were very interesting; showing how different were the necessary and proper measures for England, and our own country, and how erroneous it was to quote an English authority as to what was proper there, in reference to the soil of our own land.

Gen. T. alluded very feelingly to our present state of prosperity as an agricultural people, and to our indebtedness to a benignant Providence for its overruling kindness; advised against all approaches to war, and counselled the greatest vigilance on the part of the farming interest, how they permitted politicians to dragoon the country into a war. He adverted to the Oregon question; to a late Secretary of State's recommendation of a "masterly inactivity" on that subject; to Mr. Everett's diplomatic unwillingness to attend a public dinner, because he can not speak on the subjects which came under his supervision and observation, during his diplomatic residence in England.

He deduced from these circumstances, that the volcano was burning within, and was ready to explode at any moment. It would be the fault of the farmers of the country, if so ruinous a result should be permitted to occur.

Gen. T. made some sensible remarks upon the value of protection of domestic products, a system of which he was the ardent friend. He alluded particulary to, and cited proof of, the value of it to agricultural interests; the farming interest, he said, can not be prosperous until that of commerce and manufactures are made successful, and permanently protected; and showed the intimate relations existing between the three.

The south is now waking up to the truth and importance of all this. The emigration of Dutchess county farmers to the abandoned tobacco lands of Virginia, is working miracles in the raising of grain; the water power at Richmond is being improved, and, together with the agricultural improvements alluded to, manufactures are beginning to create a jubilee of prosperity in that State. The operation of the growth of *American* industry, and its fostering care by the States of Georgia and Tennessee, was also touched upon, and applied to strengthen the speaker's argument. South Carolina has awakened, and has her factories; the chain is broken, and it begins to be seen that it will conduce to the prosperity of that State to manufacture her own fabrics, on the spot of the growth of the raw material.

The subject of iron was dwelt upon, especially with reference to its application to railroads. All engaged in the production of iron, are consumers of the agriculturist's production. The free supply of coal in this connection, was alluded to, as a very important branch of the subject. He adverted to several gentlemen who had made fortunes out of this system, and who were using those fortunes in aid of internal improvements, manufactures, railroads, and the like. The speaker replied to the old allegation that America makes nothing, and showed the contrary in several instances. He did not blame England for trying to avail herself of all the commercial advantages she could obtain; he only recommended our own people to "go and do likewise."

Gen. T. then turned his attention to the subject of commerce, as bearing upon this question. Our farmers have a right to maintain that commerce shall be regulated on fair and equitable principles.

The speaker had no objection to free trade, if all agree to it. It don't exist, and never has. It was a pretence ; a fantasy !

The president continued his remarks at considerable length, and was listened to with marked attention by a deeply interested audience.

A large number of communications were then presented, from farmers, gardeners, silk culturists, &c., several of which were read ; and Messrs. Wakeman, Chandler, and Meigs, appointed a committee to consider the same.

General Tallmadge here presented some fine mulberry beans from Dr. Stebbins, of Northampton ; also, some foliage of the "*White Mulberry Tree, grafted*," imported by Mr. Finiels from the Cevennes in the south of France. It is there termed the *large queen leaf*, and considered *the best*.

Mr. F. has a nursery of several hundreds in this city.

Mr. Perry, of Texas, presented specimens of the products of the "Lone Star," a grain somewhat resembling our wheat. It was taken from the banks of the Missouri river, on the 4th of March last, twenty feet above water. It was when pulled three feet nine inches high, but being carried many miles on horseback, it had consequently become much broken. It was in full vigor when taken. He then exhibited samples of wild oats, (moskeet grass,) taken from the Lake Sands near Preston. It remains green during the winter. Also some of wild rye, taken from the bottom of the San Antonio river, on the 6th April last. It begins to grow in the fall, continues green all the winter, and comes to maturity in April.

The president on presenting the specimens, remarked, that it was the wish of the Institute, that all grains. grasses, and other products of the earth presented to them, be accompanied by a particular description of the soil, climate, mode of culture, &c., which secures to them the greatest prosperity.

Mr. Hennen, of New-Orleans, remarked, that he understood the Louisianians commenced manufactures in the United States, and that they are now the greatest manufacturers in the world. *They manufacture cotton from the seed.*

Recently they have introduced a new machine, by which one man can gather, and gin, an amount of cotton in one day equal to the product of the labor of forty men on the old system. It was invented by Mr. Pierce, an Englishman.

England has failed in all her attempts to raise cotton in the Indies and elsewhere; and experience proves that the cotton plant will not thrive except in about 3 degrees of latitude—between 30° and 34.°

It grows well in Egypt, and seed has been imported from there to Louisiana and found to do well. It is between the Sea Island and the Mexican. The Mexican, or Gulf cotton, was raised to its present perfection, by a careful selection of seed, and superior cultivation. The low price of cotton has compelled them to introduce labor saving machinery, and to employ their labor to better advantage than formerly; 6, 8 and 10 cents are the present prices; it has sold as high as 37 and 40 cents; hence the impossibility of raising it to advantage, and hence too the feeling fast extending itself throughout the South, that other pursuits must be substituted. Mr. H. had been familiar with the business from its infancy. He descended the Mississippi river with the *first* bale of cotton or hemp, the first hogshead of tobacco, barrel of pork, and bag of salt-petre, that came out of that river.

One of the substitutes contemplated to supply the place of cotton, was silk, in the culture of which he was prepared to embark to a considerable extent, and for producing which he considered Louisiana peculiarly adapted. He was satisfied from what he had seen, that the worms could there be fed without a loss of 1 per cent, and was confident that, with proper exertion, the South could clothe its negroes cheaper in silk than with wool or cotton. (Cheers.)

The president called the attention of the convention to some beautiful specimens of domestic sewing silk manufactured, and sent to the fair by several young ladies in South Carolina.

Mr. John S. Pierce, of Burlington Vt., now rose, and spoke of his own State as well adapted to the cultivation of silk. There was no difficulty whatever in any department of the work. They could raise the worm, reel the silk, and manufacture it too! (Applause.) Then with a glow of real pride and independence he exclaimed! And here Mr. President, is a *proof* of it! I am clothed throughout in silk manufactured entirely by my wife, and that to with no better machinery than a common wheel and loom, such as are used in working flax. (Loud and continued applause.)

The President here very humorously remarked, "here, do you see him? is a gentleman *too poor* to wear *British broadcloth*, but wears *silk* of his own production."

Mr. Pierce further stated, that his family had no experience save what they had acquired by practice, and that his lady had become satisfied that she could make a yard of silk cloth easier than of flax or wool. The suit in which he was clad was made of perforated cocoons. (It was a most beautiful and substantial article, and called forth great applause from the crowd who surrounded him for some time, to examine its texture, and to grasp the hand of a man whose *independence* and patriotism, *not* his *poverty*, compelled him to appear in the product of his own hands, in *preference* to "British broadcloth" or any other foreign fabric.

Colonel Clark remarked that the culture of cotton had become so exceedingly unprofitable, that the South must inevitably be *driven* into other pursuits. Wool offered one, and men are now traversing the Northern States, collecting droves to stock their plantations. The South presents an immense field for men of mind to occupy and cultivate; and it is likely to become by far the most important part of this Union. The culture of silk can doubtless be made a most valuable substitute for cotton. It is impossible to calculate the value of this branch of industry to the United States, when it once becomes permanently established. Teach any number of negroes to feed the silk worm and gather the cocoons, and they will produce results far exceeding any present pursuit. Here is one of our vice presidents from Vermont, clothed in silk of his own make! It is made in Maine; certainly in Connecticut; and if in the extreme North, where we are obliged to limit our operations to three, and at most four months it can be done with profit, what may not be done at the south, where six, eight and ten months may be devoted to it!

A miscellaneous conversation here followed, on the comparative quality of wool grown at the north and south, in which Mr. Afflic, of Mississippi, Col. Clark, and others participated, some contending that the wool became coarser grown at the south, and others maintaining the opposite opinion.

Dr. Wait, of Delaware, then took the floor, and said that he was probably the only person in that State, engaged in the silk culture. He commenced in 1838, the year of the " mulberry excitement," and had been engaged in it ever since, believing that from $50 to $60 clear profit can be realized from every acre devoted to the business. He had worked to great disadvantage, being obliged to pull down one year what he had erected the year previous; but since the introduction of Gill's cradle, he had diminished the labor of feeding from eight or ten to that of two persons.

He had this year been unfortunate in trusting to the worms to spin in the brush; it occasioned a loss of one half his worms. There must be attached to the cradle some apparatus for the worms to spin in. He had adopted a plan to accomplish this end, and now considered the system of cradle feeding almost perfect.

Formerly he had reeled his own cocoons, but owing to the death of his reeler, he this year brought them to the filature of Mr. Van Epps, of this city.

On motion, the convention adjourned till 4 o'clock P. M.

Afternoon Session.

The convention met according to adjournment; Vice-President Hennen in the chair.

After a miscellaneous conversation among the members, Mr. Afflick, of Mississippi, took the floor.

He had come to the north for the purpose of purchasing sheep and had just returned from examining those exhibited at the Fair of the New-York State Agricultural Society, at Utica. The sheep they have in Mississippi and Louisiana were generally poor, and the wool filled with burrs. They had, however, some there as fine as can be found in any part of the country. There pasture continues throughout the year.

Silk had been grown to some extent, and with great success. Nothing is needed but the most simple shelter, to protect from rain and birds. He saw no reason why it could not be prosecuted from March to December; and there was no obstacle to prevent Mississippi, Tennessee, Louisiana, Georgia, and South Carolina from entering into it with great success, and to any desired extent.

Dr. Phillips has taken the lead near Natchez, and has been followed by several of his neighbors.

Mr. Afflick, said the Bermuda grass had become a great article in his State. One person realized by its cultivation $100 per acre. Instead of the common rail fence, they had introduced the Cherokee rose. It is a running plant, and forms a vast hedge. A planter who has his plantation well fenced with it, need have no fear of his negroes *absconding*. These hedges grow to the height of 18 feet, fall over on each side, and are all winter covered with most beautiful single white roses.

Our finest grape at the south, is the jack grape. It grows in fine large bunches, and makes excellent wine. Mr. Longworth's grape of Ohio is the same. We are beginning to raise peaches for the New-Orleans market, which sell readily at $11 per barrel; have had them on my table measuring 13 inches in circumference. I think we might, in our fruits, astonish northern horticulturists. The comparative ease with which we produce, has made us somewhat shiftless, but we have quite as large a proportion of *good farmers* at the south as at the north.

Mr. Robinson, of Indiana, stated that there was a great opening for wool growers in Indiana, but he did not know whether they could compete with Mr. Afflick. This the future must decide. We have certainly one disadvantage—we must always provide feed for five full months.

Mr. R. thought the south could not raise sheep to any great advantage. A man to carry on this business with success, must be himself a shepherd, and carry the lambs in his own bosom, and not trust to miserable "*lazy niggers*."

He could go to Ohio, and with the assistance of one boy, return home in one month with 1,000 head of sheep, at a cost of less than one dollar per head, and if he did not wish to keep them himself could let his neighbors have them for half their wool, or receive double their number in three years. We can keep them on hay, which in the stack costs us but one dollar per ton. Our worst season is late in autumn ; the prairie grass then fails, and we are obliged to sow rye or other grain for fall feed. One of the greatest difficulties in the matter is our clayey soils ; there are other sections free from this objection in abundance, where wool can be raised to profit for 12½ cents per pound.

Gen. Tallmadge—Are they not troubled with burrs ?

Mr. R.—We are not, but in the southern part of the State, they prove a great annoyance.

Great losses are frequently sustained by over driving. Drivers should never drive over 10 miles per day ; nine-tenths of the driving is done after August, and not wishing to feed hay, they are turned out on the prairies, where they are frequently found in a state of actual starvation.

Mr. Afflick said, in answer to the remark, that the wool market might be glutted ; that Mr. Lawrence, of Boston, informed him a few days since, that he would now purchase for five years in advance, at present prices.

An animated conversation here took place on the subject of silk growing, in which several gentlemen from the South engaged. The facts elicited were of great interest, and calculated to prove conclusively the feasibility of the business, and the certainty of its progress, and final triumph.

Mr. James M. Crane, of Virginia, then arose, and called attention to the great work of internal improvement going on in that State. A complete revolution had taken place within a few years. A large number of farmers have been moving from the North during the last two or three years, who had introduced northern enterprise and skill, which are rapidly diffusing themselves over the entire State converting the worn out tobacco lands into beautiful gardens and fruitful fields. We are mainly indebted to northern capital and enterprise for this work of improvement. There are within my knowledge no less than 40 cotton factories in progress of erection, but it will be some time ere they can be completed, on account of the difficulty in getting machinery. Lowell, Paterson, and Matteawan have now orders for 12 and 18 months in advance, and the latter turned off week before last orders to an amount not less than $100,000.

A large silk factory is erecting near James' river, and the silk cause is destined to *prosper*, and eventually to succeed.

Mr. Afflick now rose, and said, he did not wish to detract from any thing northern farmers and northern enterprise or capital had done in Virginia, but he wished at the same time to give *Southerners their due.* Mr. Edmund Ruffin prepared the way for the coming of these northern aids, and but for him Virginia must have remained where she was.

He alluded also to the erection of numerous manufactories in Mississippi; but little had yet been done, but they *hoped* for *much.* Manufactures and commerce could take care of themselves, but they must have encouragement and *protection* for agriculture, and the legislation of the country should be directed to this subject. He was in favor of a reciprocal tariff, and *none other.* He said wool could be grown to great advantange and with great ease, as they had at all seasons an abundance of good pasture. The only danger was their becoming too fat, and dying. The South could no longer live by raising cotton at present prices. He strongly recommended "*Washington's Home Department*" of agriculture and the election of *farmers* for our representatives and law makers.

The convention then adjourned till to-morrow morning at 10 o'clock.

THIRD DAY.

The convention was called to order this morning at 10 o'clock, when the reading of the minutes of the previous day was dispensed with, and the regular business resumed—Gen. Tallmadge in the chair.

The president announced the following gentlemen as corresponding members to communicate with the central corresponding committee:

Dr. Holmes, of Maine; Gov. Hill, Concord, N. H.; Benjamin J. French, Braintree, Mass.; Rev. Mr. Benedict, Pawtucket, R. I.; Martin Ellsworth, East Windsor, Conn.; John S. Pierce, Burlington, Vt.; Dr. Beekman, Kinderhook, N. Y.; Dr. Lee, Buffalo, N. Y.; James Pedder, Camden, N. J.; Dr. Darlington, West Chester, Pa.; Dr. Houghton, Detroit, Mich.; Mr. Bateman, O.; Solon Robinson, Crown

Point, Ind.; J. S. Wirgh, Chicago, Ill ; Thomas B. Stevenson, Ky.; Mr. Botts, Richmond, Va.; Dr. Mears, Cambridge, Md.; C. J. Halcourt, Newcastle, Del.; Mr Manny, Fayetteville, N. C.; Wm. Gregg, Charleston, S. C.; A. E. Ernest, Macon, Ga.; Thomas Douglass, Jacksonville, E. Fa.; Alfred Hennen, New-Orleans, La.; Thomas Afflick, Washington, Miss.; Judge Carr, St. Louis, Mo.; Mark R. Cochrill, Nashville, Tenn.; Chas. F. Keller, Washington, D. C.; John King, Iowa; S. Perry, Texas.

The president next announced the names of J. S. Skinner, H. Meigs, and Edward Clark, as the central committee.

Mr. Robinson said that this committee were appointed to gather up information from all parts of the country preparatory to next year's convention, and that their report would form an exceedingly interesting feature in its proceedings. He hoped they would bear this in mind in all their investigations and researches.

Judge Meigs remarked, that this convention should extend its vision far and wide, not confining themselves to these States or this Continent. The Emperor of Russia had recently caused to be opened a correspondence with Farmers' Clubs every where.

He (Mr. M.) had endeavored to keep his eye upon the various agricultural organizations, but he was not able to keep pace, such the rapidity with which such societies are forming in every part of the known world.

The chairman of the committee to prepare an address to the people of the United States, submitted the following as their report, which was unanimously adopted, and referred to the publishing committee, and through it to the American Institute.

To the friends of improvement in the science of agriculture, horticulture and silk culture in the United States:

The convention of delegates representing these important interests, now holding their third annual meeting under the call of the American Institute of New-York, address their brethren who have not the good fortune to be with us upon this occasion, to congratulate them upon the fact that the course of improvement in the cultivation of the earth is still onward. And why should it not be so? We possess a country of rich soil, and a climate reaching from the line of tropical plants to that of a region so cold that man must resort to other means for support beside cultivating the earth.

But with all our advantages of soil and climate, there appears to be a conceded opinion among all the cultivators of the earth, that they do not enjoy the advantages and comforts enjoyed by other classes of society, who never knew what it was to earn their bread by the sweat of the brow. The cotton planter of Mississippi tells us that he cannot support his laborers upon the product of his plantation, because the price of cotton is too low. But would not a more careful management, and a more diversified culture obviate this difficulty? He is not required to raise cotton alone—his soil and climate is equally adapted to raising wool—tobacco, also, of the finest quality, will grow where cotton will, and no part of the country can excel this section of the Union for raising fruit. The remedy for over-production and low prices of cotton must be, a more diversified culture and greater amount of home productions of all the things for which the cotton region is now tributary to the North. We are gratified to learn that the cultivators of sugar do not complain of their present prospects in all the cane-growing region. We do not hear of any extended operation in the manufacture of sugar from corn-stalks.

We regret to learn that throughout several of the Southern corn-growing States there is a great failure in the crop, owing to excessive drought which has prevailed in nearly all parts of the United States during the last summer. For this we cannot suggest any remedy, except that, in all our cultivation we aim to guard against a state of drouth which prevails through all our country, to a far greater extent than the contrary during the crop growing season. We hear of the same drouth prevailing in Ohio to so great a degree that there is not foliage enough to carry the stock through the winter, in the northern part of the State. The soil here is a stiff clay, and from the personal observation of one of the committee during the last summer, he is convinced that the use of the subsoil plow upon this soil would greatly tend to lessen the tendency to loss of crops from drouth.

From Maine we hear of an almost total loss of the staple crop of our friends in that cold region of the Union, from that mysterious and very serious disease among the potatoes, that has not very inaptly been likened to the cholera in its ravages. It is of the utmost importance that all the information tending to cure this hitherto incurable disease, should be concentrated, and for that purpose we recommend that the members of the corresponding committee in the several States which have been appointed at this meeting, communicate with the committee in this city all valuable facts that they can obtain upon this subject.

From the southern part of the wheat-growing region we hear great complaints of the ravages of the weevil. The convention are anxious to gather information upon this subject. We learn that the destruction of the crop from this cause has been prevented in some regions by mixing about one bushel of lime with one hundred bushels of wheat in the barn, which has to be winnowed out before grinding. Unless some discovery is soon made to obviate the difficulty of the weevil, the cultivation of wheat in the southern parts of Indiana and Illinois, and in all States south of that must be abandoned.

The most abundant crop of all, that we are informed of, during the present year, is that of peaches in the State of Delaware. So great has the crop been, that we hear of one individual chartering a large steamboat to take the fruit of his own and son's farms to market.

The production of wheat the past year, generally speaking, has been over an average crop, and of excellent quality.

The crop of corn in the great corn region of the west, seems to be very abundant.

We also have evidence before us that tends to show that the culture of silk is now beginning to be adopted in families, where we think it may be profitably confined, while it is abandoned as unprofitable by joint stock companies.

We are pleased to learn that wool growing is found to be profitable in all parts of the United States; and that there is an immense field open for the extension of wool growing upon the great prairies of the west, and that the business would be more profitable even than that of cotton in the southern States.

But, notwithstanding all the bountiful productions of some crops, there is evidently a general depression of the agricultural class pervading the whole country.

It is one of the objects of this convention to seek out a way by which the condition and character of the cultivators of the American soil can be elevated and improved. For this purpose we recommend the extensive formation of farmers' clubs, and largely increased reading of agricultural papers and other valuable publications, which have of late years been so extensively multiplied for the farmers' use. We also recommend most earnestly to all our common as well as higher schools, to adopt, as an unvarying branch of education, subjects calculated to impress upon the minds of the young the necessity of applying science to the cultivation of the earth; and that it is the original and most honorable, as well as the most happy and healthy of all employments. We also recommend that an earnest appeal be made to Congress to adopt at once the recommendation of our Father, Washington, and establish a "Home Department for the encouragement and support of the agricultural interests of our country." In aid of these views we offer the following resolutions:

Resolved, That the American Institute, by whose co-operation this convention was called, be requested to continue their noble efforts in the cause of agricultural improvement, by adopting measures to have this matter brought before the next meeting of Congress.

Resolved, That the members of this convention will look upon it as an act of great respect to this body, if the American Institute will again take it upon themselves to publish to the world the proceedings and views of the convention.

Resolved, That the alarming situation of a great part of the world at this time, in consequence of the disease called the rot in potatoes, requires the most active, prompt, and untiring exertions of all the producers of this most important production, to subdue, if possible, the frightful ravages of this disease; and to prove, by successful experiment, that the country which originally produced this invaluable root, one of the most sustaining sources of subsistence to the population of Europe, as well as our own country, can provide a remedy to prevent its extinction.

SOLON ROBINSON,
HENRY MEIGS,
C. C. HAVEN,
Committee.

Judge Meigs alluded to that portion of the address treating of the rot in the potato. He had not before had much information on that dreaded disease. It was as prevalent in Europe as here. In France, particularly, its ravages had become absolutely alarming. The most minute examination had there been made ; millions subsist mainly on this vegetable root, and it was very doubtful whether the entire grain of the earth could supply the want of it.

Mr. Robinson, in speaking of that part of the address relating to the weevil, said, that in consequence of this insect wheat could not be raised south of Tennessee, as it was a southern insect ; but it was fast travelling north.

The president asked Mr. R. if, when speaking of the weevil, he meant the insect which had been working into the north from Canada ; showing itself first in the form of a small fly, which makes its attacks while the grain is yet in the milk, laying its egg, which in time hatches into a small worm and commences its attack upon the wheat.

Mr. Robinson replied that the insect he referred to did its injury in the stack or granary. In the evening, myriads of small flies could be seen surrounding the stacks. The injury is in the dry kernel ; the heart is completely eaten out, leaving only a mass of animal matter. The only means of cleaning was to place it in water, when the heavy particles would sink. The bread from this is offensive at best, and to him so nauseous, that nothing but actual hunger could compel him to eat it.

The injury by the weevil could be prevented in small crops by sunning. This was done by exposing the grain thinly spread, to the rays of the sun for some time, and when hottest remove it to the bin, mixing one bushel of quick lime to one hundred of wheat. But this was too much trouble, and could not be done with extensive crops, and if the wevil ever came as far north as Lake Michigan, they must give up, they could not withstand its depredations.

At the conclusion of Mr. Robinson's remarks, Mr. John Jones, a farmer from Delaware, took the floor, and presented an interesting account of his operations in redeeming the exhausted lands of that State and submitted a full report from the committee on crops, appointed by the Agricultural Society, of which he was a member, at a meeting held preparatory to appointing delegates to this convention.

Col. Clark stated, in relation to the wheat crop at the north, that a yellow insect had infested the wheat fields for some years. The insect enters just as the grain is changing from the blossom to the milk. The remedy is to scatter slacked lime over the field in a windy day. He then referred to the peach, and enumerated some of the causes of its failure. The worm which has been of so much injury, is the product of a long wasp. In speaking of the substitution of crops, he strongly recommended the introduction of the almond. Silk, too, could be introduced and cultivated to much advantage. From Maine to the south-western boundary of Texas, there was not one acre of land that might not be profitably devoted to silk. The advantages of France and Italy are not to be compared to those enjoyed by every farmer in the United States.

Dr. Wait said Delaware, too, had been annoyed by the fly, and quite as extensively as any other state; but since the introduction of the Mediterranean wheat it had entirely disappeared.

The President—What fly?

Dr. W.—It is that which produces its injury by inserting its sting into the straw; not that which is found farther north.

Mr. Robinson said he had been delighted with the description of various fine fruits; but if we partook too freely of any of them, the consequence would be a disarrangement of the system, demanding not unfrequently a medicine to which he wished to call their attention, and which could be produced in abundance, exhibiting at the same time a section of the *Palma christia* (castor oil bean). It was a transverse section, about one inch in thickness and over 18 inches in diameter. This bean grew in Washington, Miss., and was when cut, 20 feet high, and its branches would sustain the weight of a man 10 feet from the ground.

Gen. Tallmadge alluded to the Hessian fly. He said it took its name from the fact that it made its first appearance in the country about the time of the revolution, and was by some supposed to have been introduced by the straw brought over by the troops furnished by the Prince of Hesse. He described also another fly called the *Canadian Fly*, stating it was gradually moving south, had shown itself in Rensselaer and Columbia counties, and had lastly appeared in Dutchess.

A member—It is now on Long Island.

The president was not aware of that fact. The fly was very injurious, attacking the grain itself in its embryo, and in some instances ruining whole fields. He knew of no remedy but to neglect growing wheat for two or three seasons. He had not sown any this year, and hoped thus to get rid of the new evil. Some of his friends had pursued this plan with beneficial results.

Speaking of the potatoe, he said it was one of the most important crops of the farmer, and he should propose a gold medal for the best essay on the removal of that insidious disease which now threatened utterly to destroy all attempts at its successful cultivation. He should endeavor to press upon the attention of the corresponding committee the necessity of procuring new seed direct from the original land of the potatoe. The stock may have run out. Thirty years ago the St. Johnswort was so prevalent in Dutchess county as to become absolutely an annoyance; now one must offer a premium for a single specimen. The Lombardy poplar was dying through all the land, and the fact might be clearly attributed to its ever being propagated from the root. No one ever saw a poplar growing from the seed in America. Probably only one sex was imported, and hence, through a long system of planting only by slips and suckers, the race had run out. Fruits and shoots from seedlings were constantly varied, and springing up afresh, whereas suckers from roots alone grew with diminished vigor, became apparently decrepid, gouty, and rheumatic, and would finally die off. It might be so with the potatoe; and he thought we should now begin a system of seedlings for its benefit. He would be very glad if some person would try it, and get a new race from Mexico and South America; for it was very possible that the present disease was the effect of old age and a natural decline.

Mr. Meigs observed that the seedling potatoe was a most delicate plant: a rude wind or a heavy rain would destroy it; and one must prepare the ground as carefully as for celery. He had written to South America for the original natural potatoe.

A member observed that, unfortunately for this theory, the Mercer and black potatoe were raised from the seed; they were both attacked with the rot. There was a species from the Sandwich islands which, as yet, had escaped. In shape it very much resembles the Carolina.

He thought if we should let our potatoes lie fallow for a few years the disease would cease.

Mr. Robinson thought there was but one difficulty in getting over all these evils in relation to wheat and potatoes. If we could live a few years upon nothing, in a few years the trouble would vanish. He thought that such a course would be hardly practicable. We must continue to plant and sow, unless all hands go West, and feed on hogs and hominy.

In answer to the inquiry by a member, whether there might not be some cause for the disease in the soil, a gentleman from Westchester remarked that, as far as his experience went, the question of soil was immaterial. All soils were liable to produce the same disastrous results.

A conversation here followed, suggested by the president, in relation to the address of the convention being published under the sanction of the American Institute, which resulted in the resolution that the whole proceedings be published at large, as the acts of the convention alone; and for this purpose it was referred to a publishing committee, of which T. B. Wakeman was chairman.

Mr. Crane, of Va., then suggested that the next convention be held in Richmond, Va., thinking it would have a more beneficial effect. The advantages of New-York were urged, and a motion was offered to leave the selection of the place to the central committee.

The convention then adjourned *sine die*.

JAMES TALLMADGE, *Pres't.*

James Harrison, }
A. C. Van Epps, } *Secretaries.*

COMMUNICATIONS

Addressed to the Secretary of the American Institute, in reply to the Circular announcing the National Convention of Farmers, Gardeners, and Silk Culturists.

Hon. H. L. Ellsworth, of La Fayette, Ia , writing under date Sept. 20, says :

I have to acknowledge your kind favors inviting me to be present at your important fair to be held next month. I wish I *could* be with you, but I am now progressing with my next report to Congress, and can not visit the East until the last of November, on my way to Washington city.

I feel a deep interest in the proceedings of the American Institute, which has done so much good by awakening a new feeling in favor of national industry. Be not discouraged, the cause is inseparable from national prosperity ; and when we consider how much depends upon agricultural labor, we must lament that so little has been done to advance it by the General Government.

The farmers, who are "the people," have the matter in their hands. Their interests, however, will never be respected until they demand their share of public patronage. How much—how very much ! could be done by their concentrated action to advance the welfare of the nation. The farmers, mechanics and industrial portions of the community have too long confided legislation to educated and distinguished men who can not realize the wants of the working classes. There are, however, bright exceptions. There is a power which, if wielded aright, will secure what has been often claimed by a few but never enjoyed by the many.

I repeat, I wish I could be with you this year. I must forego this pleasure, hoping to enjoy it the more the succeeding year. Accept my best wishes for the prosperity of the American Institute, and the assurance of my high appreciation of your individual efforts in the good cause.

John W. Gill, Mount-Pleasant, Jefferson county, Ohio, writing under date Sept. 17th, 1845 :

After a reference to certain specimens of his silk sent for exhibition and competition, remarks : My establishment is in full operation, and doing *well*. I am so well satisfied of the complete success of the silk culture and manufacture, that I am now preparing an establishment at Wheeling, Va., in which I shall use a number of power looms in addition to our present hand looms, and other improved machinery.

Timothy Wheelwright, Wells, Maine.—In order to ascertain the practicability of growing silk with profit in this northern section of our country, I have been experimenting for the last four or five years, and invariably with success, except in one instance, where a loss was sustained, occasioned by extreme cold weather at the time the cocoons were spinning. I reel my cocoons and convert them into sewings. The last crop finished spinning the first of September, but they might be fed to advantage until the middle of September.

I prefer an open building for feeding, but think it should be so constructed as to be warmed when necessary by artificial means, especially when the worms are spinning. I have this year introduced the white and Nankin peanut worm, and find them preferable to other varieties. So well satisfied have I become of the certainty of success, that I consider silk second to no other pursuit.

D. Benedict, Pawtucket, R. I.—In regard to the silk business in this country, I have long since come to the following conclusions :

1st. In favor of its practicability and productiveness. This is based upon an experience of ten years, under all the temperatures of our climate, and with all the varieties of the worm, and foliage. I am fully satisfied of the goodness of our country for this business.

2d. That the business will not flourish *extensively* until home markets are provided for cocoons, as they are taken off, at a convenient place, at par value. I took this stand years ago, and all my experience has confirmed me more and more.

I have known a number who were fond of the business, but have given it up on account of the want of a ready market ; and I have myself lost fifty bushels of cocoons, because I could neither sell, or get them reeled. I purchased machinery of different kinds, but the necessary help, skill, &c. was wanting. Theorists may figure out the *modus operandi*, but it will not work when the business is new, and there are so many calls for help in other vocations.

As much depends upon experience and skill in this as in other pursuits, raw hands will spoil much, and what they save will be unfinished and inferior. To feed worms, and make the cocoons, requires no extraordinary skill, and if they can then be *turned off* at a *fair price*, there would be some encouragement. We have *none* now. I am pleased with the business, and can see no insurmountable difficulty in its prosecution, if its *real friends* will devise plans for its pursuit.

Reply of Dr. Daniel Stebbins, of Northampton, Mass., to a circular of the American Institute, inviting his attendance at the convention of silk culturists, &c., held during the late fair, dated Northampton, Oct. 2d, and addressed to the secretary of the Institute. He says:

On account of the situation and public duties requiring my personal attention, it is extremely doubtful whether it will be admissible for me to acept of your kind circular invitation, and of the pleasure of participating in the enjoyment of that interesting meeting. But I have, and shall continue to do all I can to advance the cause, in some other way, and to stimulate others to improve the opportunity. I have caused public notice of that convention to be extensively circulated in the papers, with the time and importance of the convention.

Perhaps in this way, I shall have rendered as much personal service as could have been reasonably expected of a solitary individual.

I labored incessantly last winter to obtain the grant of a bounty from our Legislature to encourage the growth of silk in this Commonwealth, and, through the aid of kind friends a bounty of ten cents was obtained on cocoons for the term of three years.

I had hopes that the bounty would have excited an interest throughout the Commonwealth, to commence *anew*, or *re-commence* the business of growing silk. But my anticipations have been sadly disappointed. Various causes might be assigned—the previous and extensive destruction of trees, in consequence of the tree speculation—so that only a few trees escaped, and those in the hands of individuals who were not influenced by the delusive prospect of immediate wealth.

Another cause may have deterred others, who had some remaining trees on hand, the foliage of which was injured or destroyed by early spring frosts at the very time that farmers should be about their spring work, and could not wait for the reproduction of foliage ; and there may have been other causes. Trees may be reproduced, and another spring frost may not occur next year. But we very well know that when any business has been long suspended, from adverse causes, and other pursuits adopted, it is very difficult to persuade people to return to former occupations, unless by the strongest inducements of more immediate reward, than can now be guaranteed. As in every other great undertaking, we want the "long pull, strong pull, and pull altogether," and the same exertions in the silk culture.

The spring frosts did not materially injure the foliage of my trees, on account of the favorable location.

Although I have ten or twelve acres of the best variety for growing silk, my health and other business requirements prevent my personal attention to the business. The present year I leased to the Messrs. Clemens, of South Granby, Ct., who will attend the convention, and relate their own story. There has been some silk reeled, and a large quantity of silk worms' eggs left in my care for another year, and a plenty of good cuttings will be preserved.

Before the Messrs. Clemens closed their business, I had foliage sufficient to feed one million of worms. I have now in the care of another person two or three hundred thousand worms to test late feeding upon crude and frost-bitten foliage, for we have had severe frosts, and sudden changes, with the mercury suddenly dropping from 60 or 70 down to 40°

I have no confidence, however, in this *late crop*, and am confirmed in the opinion of an early crop being the most safe and sure, so as to close up the business as early as practicable in the month of July.

I am peculiarly favored with a location to keep my eggs, and have now on hand several ounces of last year's production, and there is no more appearance of hatching than at the time they were laid, more than a year since ; and to test these, I have brought out fifteen to twenty thousand, which hatch in five or six days, appear well, and, as the fishermen say, "*kicking*." They eat well, and shall try the effect of unpropitious weather and crude foliage.

The crop of two or three hundred thousand, hatched the beginning of September, appear rather torpid cold mornings, but by the aid of moderate artificial heat, the chills are removed, and they begin to eat late in the morning, and can take only three meals in the day. They have not had the *ague*, but I am daily expecting to find them *defunct*.

The silk statistics of Northampton, as taken this spring, by a resolve of the Legislature, is as follows, being furnished therewith by a person who took the list :

There are three silk manufactories, with a capital of $14,000. Ten males and forty-seven females employed.

75 to 100 lbs. American silk, worth $500.

Over 6000 lbs. of sewing silk and twist manufactured, worth $41,500.

Immense quantity of silk-worm eggs, raised for market by private individuals.

The weight of cocoons and quantity of reeled silk for 1845, not yet ascertained.

The New-England silk convention convened the 1st inst., according to previous notice, to receive written communications to be forwarded to New-York ; but none presented for that purpose. Delegates were appointed, one from each of the New-England States, to attend personally, or appoint a substitute. Since writing the above, I am now notified of a public meeting, at 10 o'clock, A. M., on the 9th of October, of which I am secretary, and my services on that occasion and day cannot be dispensed with, as business of the whole county will come before the meeting. Therefore, please accept of my best wishes for success.

Very respectfully yours,

D. STEBBINS.

Since writing the enclosed, I have a letter from G. Chamberlain, of Lima, Peru, South America, who last autumn called on you for the report, not then out ; he wishes to obtain one if practicable. He took out a quantity of machinery, lost their ship, all his Canton trees, and pea-nut eggs : wishes me to send enough of *each* to get the variety.

About this time, hoped to get up his machines, and then inform me the result of his enterprise. He had made some silk, &c., of which, I think, were samples on the card I sent you last year.

His letter is dated Lima, May 24; expects a gentleman to come out, and can take anything; says there is quite an interest taken in raising silk in Lima, but most people are too timid to undertake a new business; that the climate is, above *all others*, fitted for the cultivation, and eventually will be as profitable as are her mines.

Mr. N. Storrs, a native of this place, has resided in Jamaica, with S. Whitmarsh, of Savannah, Ga., is acquainted with the cultivation of mulberry trees, does not know as he ever fed worms in Jamaica and South.

Mr. Storrs was not at the New-England convention, nevertheless, was appointed a delegate, that, on his way south, he might meet with the convention, and carry out information. I believe he is now engaged in the cultivation of sea island cotton, on Defusky Island, down the river from Savannah. D. S.

In a postscript, Dr. S. refers to a family in his neighborhood, who have been long and ardently attached to the silk cause, and have been growing cocoons and manufacturing sewings for years. He says, in this town, Joseph Clark introduced the culture of silk fifty or sixty years ago, and made both sewings and ladies' dresses, samples of which were shown me. Mr. Clark kept a silk journal for a long time, by which it appears silk has been longer grown in this town—an uninterrupted succession of years—than in any other place in the country, except in Mansfield, Connecticut.

With Dr. Stebbins's papers, were also presented the

PROCEEDINGS

Of the New-England Silk Convention, held at Northampton, October 1st, 1845.

Dr. Daniel Stebbins, *President.*

During the sitting of this convention, the following resolutions were submitted, and unanimously adopted as their views on the several heads of which they treat:

Resolved, That silk culture, agriculture, and horticulture are intimately connected, as sources of wealth for individuals engaged therein, and may be of great public benefit to the country—each being adapted to different degrees of health and vigor of constitution.

Resolved, That, as *Americans*, we ought to be the producers of every valuable crop from our soil necessary for the comfort and subsistence of our population, rather than depend upon the industry and enterprise of foreign nations.

Resolved, That, having the appropriate soil and climate, and, for growing silk, the necessary skill, and industrial habits, and perseverence requisite to compete with the cheap labor and living of any other nation whatever, we may, with these appliances, hope to become as eminent for silk productions as we are now for our cotton.

Resolved, That, although it might be as *commendable* for each family to raise and manufacture its own sewings, yet we commend *uniform reeling*, for manufacturing purposes, as soon as filatures shall be created among us to purchase our cocoons.

Resolved, That, as the feeding and raising of silk worms is light and pleasant, the labor of children, females, and individuals whose circumstances or health disqualify them for the more laborious field exercises, ought to be encouraged, preferred, employed, and instructed in a business which is destined to afford one of our principal staples.

Resolved, That this Convention duly appreciate the aid and assistance of the American Institute to *promote* the cause of silk culture in the United States, and, in obedience to their request, we will appoint delegates to attend the National Convention of Farmers, Gardeners and Silk Culturists, on the 9th of October inst., there to represent the New England Convention, its interests, experiments, and prospects, and to unite in all such measures as may be adopted for the general encouragement of farmers, gardeners, and silk growers.

DANIEL STEBBINS, *President.*

J. W. Smith, *Secretary.*

Samuel Barrett, French Creek, Va., expressed great interest in the silk culture, considering it, as he did, an enterprise of great national advantage, and individual gain. Has not done much the present season, but this little had increased his confidence in, and more fully assured him of the entire practicability and ultimate success of the *whole business.*

He has been gradually multiplying his trees for years, with a view of entering largely in the culture, when they shall have arrived at maturity. He says, " Being at a great distance from any silk grower, I have found it extremely difficult to obtain eggs. I have for a year or two been much retarded on this account.

The past year, I placed my eggs in an ice-house in March, after considerable warm weather, and feared they might, in consequence, be injured. About one half of them were hatched, May 8th. The foliage had then become quite large and abundant. On the 14th, we had a severe frost, which killed all the foliage, except here and there a leaf which had been concealed by the grass.

On the night of the 24th, we were visited by a second frost, cutting off what had started since the 26th. Again, on the 31st, another quite as severe as either of the others. I still kept my worms alive on a few frost-bitten leaves, but they did not spin, or but few of them, although they did not appear to be diseased.

I exposed another crop of eggs, June 23d—1 ounce. They hatched in 14 days. During the 1st, 2d, and 3d ages, many of them died. The remainder appeared healthy, and wound superior cocoons in twenty-eight days. The variety, the " Mirabel Inanes," I fed five times per day, and exposed them freely to fresh air. The heat was a part of the time intense. They made me 40 lbs. of cocoons, weighing 250 to the pound. The mortality among my worms, I attribute to a *natural imperfection* of the egg, or injury sustained by placing them in ice after the hatching process had commenced. Good attention, and thorough ventilation alone, saved *many*.

I have this season tried an experiment on the raising of the multicaulus from the buds. About the middle of May I planted a small patch of ground with multicaulus branches, which had been buried during the winter in the open field. When I planted them, some of the buds had grown an inch, so that in handling hundreds of them broke off. Small fibres of roots had started opposite each bud. I prepared and furrowed my ground, making the furrows two feet apart, and laying in the branches without vacancy; throughout the whole length of the furrows, laying at least two branches side by side. They came up directly, and grew most luxuriantly, notwithstanding it was extremely dry. The frosts killed all up at the first of June. Wishing to ascertain how many leaves I could gather from the patch, I have just gathered them from one row. I found them to weigh 31 lbs., which, being a fair average, the 40 rows (saved from the frost) would produce 1240 lbs. of leaves; 50 lbs. are allowed to subsist 1000 worms. According to this calculation, the 40 rows would feed 25,000 worms, which should produce at least 6 lbs. reeled silk, and possibly 8 lbs. I measured the ground carefully; there were 30 square rods. At this rate I could produce from one acre 6613 lbs. of leaves, silk worth $165, at $5 per lb. This is the product of one acre of multicaulis, of the first year's growth, from the beds.

The land on which they were planted was thin, and had been but slightly manured the last year for corn. I once almost doubted the statement of Rev. Mr. Lane, that he had obtained 2,200 lbs. of leaves from a quarter of an acre. I no longer doubt its correctness. I have, in all, about two acres of trees, consisting of Canton and multicaulis, half of them two and three years old. They occupy land which would produce only 20 or 25 bushels of corn to the acre, and I can now gather at least 4 tons of leaves."

Mr. Barrett offered the following remarks on the potatoe crop in Virginia:

The disease which appeared in New-England a year or two since has this year reached us in Western Virginia. As far as I have read, the rot is making greater or less ravages. My late planted crop is almost totally destroyed. That is the kind on which I relied for family use. I allude to the Mercer. My Merino potatoes are but little affected with the disease—scarcely worth naming. I find what were planted for early use—the few that remained undug of the Mercers—are little affected; and it has given rise to the question, whether planting would not measurably obviate the difficulty. This question your facilities for collecting facts have or will determine.

Mr. E. S. Bartholemew, of Portland, Chatauque county, N. Y., under date Oct. 2d, in anticipation of the convention, says:

I learn by the last number of the Cultivator that a silk convention is to be held in connexion with the approaching anniversary of the American Institute. It would be highly gratifying to me to meet with you on that occasion, and participate with the friends of home industry in their deliberations upon this great and important national enterprise—the growth and manufacture of silk. I am a silk grower, and it affords me great pleasure to see institutions of so high standing and character devoting a portion of their time to collect and disseminate information upon subjects of direct interest to the nation.

I commenced the growing and manufacturing of silk in 1844. In the spring of 1833, a gentleman having a nursery of Italian mulberry, wishing to eradicate them, gave them to me. I transplanted them, 7000 in all. In the spring of 1844, I put out an acre of multicaulis, and on the last of May commenced feeding. I raised 58 lbs. of cocoons, which, after deducting one bushel for eggs, yielded me 6 lbs. 1 oz. reeled silk; this I made into sewings, for which I found a ready sale.

This season I have grown 150 lbs. 14 oz. of cocoons. First crop weighed 12 lbs. 8 oz. to the bushel; never have seen larger worms.

Before commencing I obtained one of the reports of the silk convention of 1843, and read carefully all the letters detailing the experience of the many who corresponded with the convention of that year. I came to the conclusion that the nearer I approached *dame Nature* in the treatment of the worm, the better. Following up this conclusion, I erected me a cocoonery 20 by 24 feet, with large doors covering the entire sides, hung on hinges at their upper edge, so as to swing outwardly, and form an awning. I leave these open all the time while feeding, and close only when cold and rainy; have ventilators to use at such times, and a stove to maintain a uniform temperature. I feed from seven to fourteen times per day. My rules are, the more air the better, strict cleanliness and abundance of room. By observing these rules, do not loose 10 per cent. I now have machinery in operation for making sewings. I am satisfied that the Multicaulis and early feeding will be attended with success. I am of opinion that very many destroy most of their worms by allowing their eggs to become moist in the ice-house, or place of keeping; they should invariably be kept dry and cool. I keep mine in a tin box, perforated in the top for the admission of air; this is placed within a teachest with the lead in, which also prevents moisture; this I deposite in a cavity in my cellar. If worms could be all fed at a time, early, they would do much better, and make more silk at less expense. I use the earth for my floor, and in case of too great heat, irrigate with water.

The drought and intense heat of the present season, have caused much disease in many parts. For several days in succession, the heat continued intense, with little or no circulation of air, and the worms died by hundreds. I tried the experiment of a cold water bath, and found it to answer a good purpose. I sprinkled it on them gently with a small corn broom. I am satisfied that cold water is not detrimental, either as a bath or on foliage, if not applied too often. I shall continue to enlarge my operations, and form a market for cocoons which I shall prepare for market in raw silk. I can grow and reel ready for market, at $1.56 per lb. Reeling is perfectly simple and easy, as well as all the *modus operandi* of the silk culture. Many in this neighborhood have entered into the business and failed. Tight feeding, and only twice a day. Why not?

John Jones, Wheatland, New Castle co., Delaware.—I regret to hear so much complaint among farmers in different sections of the Union, about the want of a market for the product of their farms, at remunerating prices. I hear them from Virginia, and from the south generally, as well as from the North Western States. They come from sections strictly agricultural, or producing.

It gives me pleasure to present a reversed picture of my own State. The varied occupations of our citizens were never in a more prosperous and thriving condition. More than two hundred and fifty substantial dwellings have been erected, or are now in process of erection in the city of Wilmington, and other parts of the State in proportion. In our ship-yard, several steam and other vessels with iron hulls have been built this season. The display of manufactured articles at our Agricultural Fair and Mechanics' Institute, evinced a degree of perfection never before attained.

Several joint-stock companies, chartered by our Legislature last winter, are preparing to go into active operation. Their location is on the Brandywine, formerly that of the paper mill of Thomas Gilpin, on the north side, on tide water, where loaded vessels can unload on the floors of the factory. These will furnish an additional market for the products of our farmers. The whole amount of capital employed in manufactories, in 1840, in this county, was $1,289,700 ; the amount of machinery annually made, $314,000. I will name two or three items in the list of our manufactures.

New Castle county made in 1840, 2,100,000 lbs. of powder. A single firm (Messrs. Dupont), are now working up 5000 lbs. of wool weekly. This is one of the oldest establishments, and of great advantage to the farmers, in furnishing a demand for their wool and provisions. The prejudice against home manufactures *has* been so great that these gentlemen could not sell, even in time of war for $8, until they employed a *foreign* agent, who secured a ready sale at $14 per yard.

Some attention has been given to wool growing. In Sussex, the most southern county in the State, they numbered 17,996. In New Castle, our favorite sheep has been the Bakewell. The late John Barney, frequently sold the bucks for $100 a piece. The first full blooded Merino ram (Don Pedro) brought to this country, was imported from England by the Mrssrs. Dupont. Many of the descendants of Don Pedro are yet in our flocks.

Major Philip Reybold is now the most extensive wool-grower in Delaware. His flocks now number about 2,000. He has for several years held his annual sales of *fat sheep* in Philadelphia and Baltimore ; last year many were sent to New-York, and amongst the number, the fine wether "Frank," whose live weight was 292 lbs. With the view of improving his own and the flocks around him, the Major sent his youngest son, Clayton Reybold, to England, and he has returned, bringing with him several ewes and rams from the best flocks of England, among them the celebrated Cotswold.

Our stock, though not extensive, is generally good. Samuel Cemby has his favorite Durham cow Blossom, giving her thirty-six quarts of milk per day when *fresh*, and sixteen quarts per day until *coming in.*

Chancey P. Holcomb has his Devon cow Lady, which took the first premium, by yielding the milk which made *twenty-one pounds of butter in one week.* The writer has his *little* cow Yellow Flower, of native stock, known by many as the "little yellow cow with a white face." I bought her dam many years ago for $116, and kept her for her extraordinary milking quality, until very old. I then fatted her with corn meal, and, when dressed, weighed 285 lbs. The "Yellow Flower" is larger than her dam ; her height, at four years old, was 3 feet 10 inches. In my report to our Agricultural Society, I have given the particulars of her milk and butter.

Many store cattle are annually purchased from drovers from the West, and from Western New York. They winter well, and pasture upon our luxuriant reclaimed river meadows ; and sell in the fall to the New-York market. The amount in value of neat cattle in this county, in 1840, was $702,000. The annual product of the dairy, $66,630. Our horses we purchase of western drovers. Of pork, we do not raise our own supply. We deem it better to sell our corn to an eastern market, and buy our bacon from our western brother farmers. Of distilleries, we have none in this State. Whiskey made, none ; no, not *one drop !*

The following additional particulars are extracted from Mr. Jones's report to the Agricultural Society of New Castle county, as chairman of the committee on crops.

He congratulated the society on the complete success which had every where attended the use of lime. The offer of a premium by the society, had induced extra exertions in the competitors, and secured results heretofore hardly if ever known amongst them, and which are highly encouraging, when it is considered how illy adapted are the lands naturally to the production of wheat.

INSTANCES.

James Simpson, of White Clay Hundred, had raised 103 bushels of wheat from two and three-quarter acres. E. Bellah, of Brandywine Hundred, 39 bushels per acre, on a field of ninety acres. This was sown among *standing corn in July, and cultivated in.* R. Millward of Peucador Hundred, raised 37 bushels per acre, on a field of 36 acres, on land purchased a short time since at $15 per acre, when it would not produce more than 5 bushels per acre.

The manures used were about 200 bushels of shell marl, and 10 one horse cart-loads of Philadelphia compost, the refuse of a glue-boiling establishment.

Joseph Deihl, of St. George's Hundred, produced 30 bushels per acre, on a lot of seven acres. His crop was much injured in threshing. It was a beautiful variety of white wheat, and sold for $1.25 per bushel, for seed. This crop was sown on the same day with an adjoining lot, sown with red chaff wheat, obtained from a distance expressly for the experiment ; the result was, the white produced nearly double the quantity of the red, and of much better quality. The red was much affected by rust ; the white not at all.

Many of our farmers have adopted the improved mode of enriching and cultivating their farms, and have consequently largely increased their productiveness.

The corn crop is not as good as that of wheat. The early planting has not done as well as the later.

Oats is scarcely a half crop, and inferior at that.

The extreme drought cut off our hay crop at least *one-half.*

Potatoes, as last year, short crop.

Beets and Ruta-bagas, but few raised—corn being considered better food both for man and beast.

Buckwheat appears abundant. So great has been the advance, particularly in the production of wheat, that the secretary of the "Home Department," the Commissioner of Patents, will have to alter his report for this State very materially.

From a single farm of less than three hundred and seventy-five acres, have been gathered 2,884 bushels of wheat, or about the hundredth part of the product of the entire State in 1840, the Marshal reporting only 315,165 bushels. New Castle county *alone* has this year yielded over 400,000 bushels, which is considered evidence enough of improvement. Farming implements have been much improved, and labor-saving machinery adopted.

The seed and grain planter, drill and reaping machine, have been of great value, and will soon be generally in use. Hussey's reaping machine has been thoroughly tested, and with entire satisfaction. It reaps twenty acres per day, and does its work well.

Another source of incalculable value to us, has been our farmers' clubs, of which we have one in each county in the State, holding monthly meetings. Here we get together at our different farm-houses, and having examined the farm, compared notes, &c., we partake of a *good farmer's dinner, all from the farm*, and return, each determined to excel his neighbor.

The cultivation of the peach is receiving its share of attention. In some sections, this fruit is raised in enormous quantities. Thousands of acres near our eastern landings are planted with peach trees. Some idea may be formed of the extent, from the fact that from a single plantation, that of Major Reybold & Sons, 542 baskets were shipped in one day, about the last of August. We call Mr. R. the *Field Marshal* in the peach business. Previous to the first of September, he shipped upwards of 16,000 baskets. The Major has half a score of sons and sons-in-law, all of the right stamp. They are generally engaged in the peach business, which they are pushing with great perseverance and success.

HEALTH.

Delaware, as the eastern shore of Maryland, is called *sickly*. Judge from the statistical report.

Population,	82,000
Over one hundred years old,	14

The per centage of our taxes, I do not now recollect. My own is $56.23, upon seven hundred and forty-three acres of land, capable of producing the return specified in my report.

Our road tax exceeds all others, including those for the support of the poor, and for educational purposes.

Our schools are supported from the State Fund. In this county, we have seventy-four districts ; each receives $160 per annum. The city of Wilmington has a population of 10,000, and by consolidating districts, requires but $250, in addition to the monies received from the State, for the support of their schools.

Letter from Romulus Gildersleeve, of Penn Yan, President of the Yates county Agricultural Society.

The circular of the American Institute, announcing a National Convention of farmers, &c., was duly received.

The receipt of this circular, being very near our annual fair, I concluded not to call a special meeting, but present it at that time.

What our society will think best to *do*, it is difficult to say. There is but little spirit manifested among the majority of our farmers. The wealthy hold back, and the minority in wealth are anxious to sustain such annual gatherings as your proposed convention, for the diffusion of knowledge calculated to advance the agricultural interests of the country. There is wealth enough in the county of Yates to make it surpass any other county, as it does already in the staples, wheat and wool—according to the census of 1840.

In soliciting me, the Institute calls upon the wrong person to describe accurately the progress of agriculture in its various branches ; but "what is every body's business is nobody's." I am nought but a *hard-fisted farmer*, and among the poorest, having little means to carry to perfection what I wish to do. This county, as you are doubtless aware, occupies the northern part of Ontario, of which it formed a part until 1827. Not more than one-half was then considered a wheat growing district, the remainder hardly fit for grazing. The outlet of Crooked Lake furnishes water for inexhaustible hydraulic purposes. This stream is capable of propelling machinery almost every rod for six miles. Besides this, there are several smaller streams, upon which sawing is done four or five months in the year. This county consists of eight towns. Benton and Milo, bordering upon Seneca Lake, have the smoothest surface ; Starkey and Steuben, on the south-west, were considered the wheat districts. Barrington, Jerusalem, Potter, Middlesex, and Italy, are broken and hilly. The soil consists mostly of clay and marl, filled with flat stones. In all the western part, the water is soft, and no limestone found. Milo and Benton furnish large quantities of limestone. The soil is well adapted to the production of wheat. It is no uncommon thing for farmers to raise thirty and forty bushels of wheat per acre. Thirty bushels has been the average of many crops the present season. In one instance, thirty-seven bushels of spring wheat were raised from one acre, accurately measured. Three acres, in 1844, produced forty-five bushels per acre, or one hundred and thirty-five on three acres. The wheat was of the Hutchinson variety—a bearded wheat. The " back towns," as they are termed by us, are coming up. Land that ten years ago would not produce ten bushels per acre, now yield twenty and twenty-five. The soil in Milo and Benton is clay and gravel, with some loam and marl. The original settlers considered the ridges of little value, and occupied only the lowlands. Barley has been raised for a few years past, in larger quantities and with better success than wheat. It meets a ready market, makes a quick return, and leaves the land in fine order for wheat. For the last few years barley may be ranked among the staples of Yates county. Our corn and potatoes are mostly consumed within the county. Neat cattle have as yet received little attention; few of improved blood are to be met with.

There has been much attention given to sheep, and in this respect we lay some claim to distinction. It is a question with us which will prove the most advantageous, those producing very fine wool, or of a medium quality. The latter sell more readily to the butchers, owing to their size.

Except potatoes, root crops have received but little attention. A few farmers in the neighborhood of Penn Yan, have this year commenced the culture of the carrot, but the extreme drought has so much discouraged them that it will not probably be attempted next season.

There are probably not over five acres of Ruta-baga in the county. The timber on the wheat-growing districts is oak, mostly on high land, the low land being timbered with beach, sugar maple, and elm, with a diversity of other timber. Barrington and Starkey have some white pine ; the western part of Jerusalem is nearly all pine ; Italy, pine and hemlock.

Nothing of note has been done in the culture of silk ; a few specimens have been exhibited at our fairs. When the Morus multicaulus fever raged, it was thought that many would engage in growing and cultivating silk ; but, with *that*, it fell to the ground. I have here given a summary of what we are doing. The picture is not all to our credit, when we look to the march of science connected with the tilling of the soil, yet we look for a better day *a-head*, when science and hand labour shall be mingled together in every county.

Having given this *general* view of things, I proceed to state *particulars*, as they have come under my immediate observation, on my own farm, and those of my neighbors.

I purchased my present farm in 1831, and found it in the worst condition possible. I commenced ploughing, and found that a single team would not do even the lightest ploughing ; it was hard work for a double team to plough corn stubbe six inches deep. It had never been ploughed over four inches. I subjected my whole farm to a system of deep ploughing, and so thoroughly have I got the soil under control, that a single team will break up fallow that has been two or three years in grass. At the time I purchased, it was said of one field, that " it would not rase white beans." At the time it had wheat on it, which yielded about eight bushels per acre. In 1833, I planted it to corn, and gathered twenty bushels of shelled corn per acre ; this was cut up, and sowed with wheat, the 13th October ; product, eight bushels per acre. I seeded it with clover and timothy in the spring, then pastured one year ; in 1836, manured with well-rotted manure, at the rate of sixty loads per acre ; then ploughed, and planted with corn and potatoes. The product was forty bushels of shelled corn, and three hundred bushes of potatoes per acre.

In 1837, planted corn on potatoe ground, and potatoes on corn ground, with about the same success as before. In 1838, sowed one acre to spring wheat, (one and a half bushels per acre ;) product, thirty bushels, at 12 shillings per bushel ; one acre with barley, (two bushels per acre ;) product, forty-sevevn and a half bushels, at 4 shillings per acre ; one acre with flax, (three-quarters of a bushel per acre,) harrowed before sowing, and harrowed in ; product, eleven bushels, at $1 per bushel. The above three acres were ploughed once, and sowed with *winter* wheat, about the 23d of September, of the same year, at the rate of one and a quarter bushels per acre ;

product, twenty-five and a half, twenty-six and a half, and twenty-seven bushels, at 12 shillings per bushel: the flax ground producing the most. The spring wheat ground was near the house, and I attributed a loss on account of the fowls. The straw on the barley stubble was coarse and harsh; on flax stubble, fine and soft. This has since been in meadow, with a yearly product of two and a half and three tons per acre. I might multiply facts, but let these suffice, with one other, in regard to the use of plaster on corn. In 1832, I plastered with Cayuga plaster, a field of corn, excepting a few rows on one side of the field. This was done as soon as the rows could be distinguished. At the first dressing, the plastered corn was largest; ten days subsequently it was dressed again, when that which had not been plastered was about the size of the plastered at the *first* dressing. There was a similar difference throughout the season. At harvest, that not plastered produced seven and a half baskets; and the same number of rows of the plastered, produced fourteen baskets, picked and measured by the same man. The care was the same, except the plaster. I send you a box containing a few specimens of wheat and foul seeds found on most of our farms. The wheat was raised by myself this season, and is a fair specimen of the entire crop of each variety. I send also two specimens of barley. It may be thought folly to send *foul seeds* for exhibition. The fact is, seedmen buy seed filled with every thing but what it *should* contain, not knowing what they purchase. I will give a description hereafter, if desired. Many more varieties might be collected, which trouble us much, and sometimes smother entire fields of wheat.

(F.)

Opening Addresses delivered at the 18th Annual Fair, October, 1845, by Professor J. J. Mapes.

The question has been occasionally asked, by those inimical to our institution, What has the American Institute done? what benefits have the public received from it? &c.

It would be much more difficult to say what it *has not done*, than to answer these questions.

The American Institute is composed of the largest association of philanthropists of any institution in our country, and their labors for the public benefit have been most untiring.

After eighteen years of active industry, it has established correspondence with every State and county in this Union. Its services to the agriculturists are freely admitted by every farmer from Maine to Georgia. The agricultural department of our Institute holds yearly conventions, bringing together the results of agricultural experiments from every section of the country, and more queries and enigmas have been definitely settled by it. than by all other sources for disseminating practical knowledge in this important branch of industry. Our repository is the receptacle of seeds from all parts of the world, sent there by philanthropical individuals for distribution, and the results of the best modes of culture ascertained by our friends, are disseminated for the public benefit.

On the first and third Tuesdays of each month the Farmers' Club holds its meetings at the rooms of the Institute; and at these meetings practical farmers present specimens of products, and describe modes of culture. Their remarks are eagerly caught up by the reporters of the various agricultural papers throughout the country; and thus all the improvements of the experimental farmers in the neighborhood of New-York are published for the use of the farmer.

It is well known that many of the fine lands of Virginia, and other parts of the southern country, have been thought to be *worn out;* but our Farmer's Club has clearly established the fact, that it is only the surface that has been exhausted; and that by deep ploughing, and light manuring alone, most of these lands may be again rendered available. These hints have been put in practice, and many lands which could have been purchased a few years since for $5 or $10 per acre, are now worth from $40 to $100 per acre. This practice of deep plowing is now restoring the miscalled worn-out lands of Virginia to luxuriant and profitable farms. The Agricultural Society of this State was first proposed at our agricultural convention, and the chairman of our board of agriculture, Gen. Jeremiah Johnson, advocated the cause so ably before the State Legislature, as to result in the formation of the State society.

Our ploughing matches have also been productive of benefit. The style of plow, mode of handling, &c., are all important. Thousands of dollars are spent annually to improve the telescope, and nothing for the plow.

The exertions of the Farmer's Club, added to our exhibition, have doubled the supply of grapes in the vicinity of New-York, within the last few years; and the immense amount of grapes raised by one of our members at Croton Point, is too well known to require comment.

The horticultural exhibition at our fairs brings us friends from all parts of the Union; and the number of experimental horticulturists from the vicinity of Boston, now in this room, clearly proves the estimation in which our Institute is held by our neighbors of Massachusetts.

It cannot be doubted, that the improvements in our agricultural produts, from the causes already stated, are at least one per cent. on the whole amount of the crop: and as this amount, exclusive of the tobacco, sugar, cotton and rice crops, is certainly $700,000,000 our Institute has benefitted the country at large, in the department of agriculture alone, $7,000,000 per annum.

The sugar planters of Louisiana have received a still greater ratio of benefit from the exertions of some of the members of this institution, and they freely acknowledge it.

Who first proposed the geological survey of this State? The American Institute. Many of its members, and our superintending agent, spent the greater part of a winter in Albany, and by their untiring exertions, succeeded in procuring the law authorizing this survey; thus, not only have the mineral resources of the State been made known to the public at large, but its natural history has found record before the *march of internal improvement should forever obliterate* much of its minutiæ from the face of nature.

Our repository furnishes statistics for the use of Congress on almost every subject connected with the public welfare.

A not less useful adjunct is our committee on arts and sciences. This committee is composed of some of the most able philosophers and engineers of our country, and their labors have been productive of the greatest benefits.

Almost every invention of supposed utility is submitted to them, by the inventors, for investigation, their favorable report being deemed sufficient to authorize capitalists to invest their means in the project.

These investigations are always conducted with great patience, and inventors are often prevented thereby, from wasting their means in the creation of mere chimeras. Ingenious thoughts, by the advice and assistance of this committee, are rendered utilitarian; and thus the poor but ingenious mechanic is both protected and assisted in consummating his inventions. It is a well known fact, that the product to inventors of all the patent rights taken out in this country, has scarcely exceeded the amount of fees paid to the patent office for issuing the patents; and yet, in the face of such a fact, no instance can be shown where the committee of arts and sciences of the American Institute has given an opinion, which has afterwards proved fallacious. Their certificates, in consequence, are sought after by inventors with an eagerness which proves their value.

The Institute has also established *conversational meetings*, and their well filled rooms on these occasions show the estimation in which they are held by those who attend them.

At these meetings, a subject of useful character is proposed for conversation; each member present states *any facts* he may know in relation to this subject, but he can only occupy fifteen minutes; thus long speeches are prevented, and short, crisp, *practical knowledge* alone is elicited. By this method, the reading and experience of one hundred men for twenty years, is made available to all present in a single hour. When the tempering of steel was our subject, it became evident, that on leaving the room, every person present knew more of the matter than any *one*, however practical, at the commencement of the meeting. The public journals throughout the country have published reports of these meetings, and these reports are continually referred to for information.

A faculty has also been established, and professors appointed to the different departments, whose duties are to furnish information gratis to those who may apply for it.

By an agreement made with the corporation of the city, the tables of our reading rooms are furnished with all the useful periodicals of the day, both foreign and domestic; and these rooms, together with our large and well-selected library, are thrown open to the use of the public, being the only *free library* in the city. This agreement was made with the corporation in consideration of their granting us a lease of our rooms for ten years.

Our repository contains 254 models of useful inventions, presented to the Institute by the originators, and these are daily examined by those having occasion for such machines. Also, a collection of seeds, wax fruits, minerals, artificial and natural manures, mechanical drawings, &c.

The silk conventions fostered by our Institute call together the silk culturists and manufacturers throughout the country; and the laudable emulation excited by our premiums awarded for silks, is fast doing away with the necessity of paying European silk growers a sum nearly equal the total revenue of the country yearly for this material.

The amount of silk goods imported in 1837 was $23,000,000.

In the year 1828 our Institute imported the Italian mulberry seeds, and through the enterprise of our member, Doct. Pascalis, the morus multicaulis was the same year introduced into this country, being but one year after its introduction into France.

The two reports of our silk conventions, published by the Legislature of this State, contain more information on the subject of silk than any other work yet published. One of these reports has been republished by the State of Kentucky.

In addition to the regular premiums offered for silk goods, one of our members has presented us $1,000, to be awarded in premiums for silks.

The necessity of a school for the arts of design, as applied to the mechanic arts, has long been felt in this country. In France the arts of design form a part of the common school education, and in consequence, the whole world is put under contribution for French *patterns*. The quality of our woods is better, and our workmanship equally good with the French, but the superiority of their designs enables them to sell French furniture in our markets at double the prices of our own. They send us a new pattern of calico at 75 cents per yard, which we imitate in a few weeks at 12½ cents per yard; but in these few weeks our market is supplied at a profit to the French manufacturer of many times the whole cost, and simply for the want of a school for the arts of design. Such a school we have organized for this winter, and many of our first artists have volunteered their services as teachers. The National Academy of Design will doubless lend us their valuable aid in so laudable an undertaking, and the results can not but prove beneficial to our mechanical interests.

Our rooms in the Park are daily visited by our citizens in search of mechanical and other information, and from these rooms being used as the place of meeting for engineers, agriculturists and others, applicants are seldom disappointed in obtaining the information desired.

We often receive letters of thanks from mechanics acknowledging the benefits received from our institution, and not unfrequently attributing their success in business to our fostering aid.

The printed reports emanating from the Repository are generally of a useful character, and furnish matter for periodicals and newspapers of a valuable kind. These reports are printed in liberal quantities, and much information is thus disseminated.

The Shipwreck Society had its birth in the American Institute, and our rooms are still used for its meetings. This society has published a valuable book of directions for the recovery of drowned persons, which book has more than once been the means of saving human life. A system of coast signals has also emanated from this society and a well-matured plan for a steam tug, with necessary models, &c., are now in the repository, ready for the action of the government, when they may see proper to give it their attention.

During the winter season we have lectures delivered at the rooms in the Park on all subjects of interest; and on such ocasions the public generally are invited to attend without charge.

It would be an endless task to portray the benefits which have resulted from our yearly fairs; the emulation which has arisen from competition has produced all the wonderful results which are now before you. What is the character of American manufactures now as compared with those exhibited at our first fair? Look at our cloth room, and see there cloths which would do honor to any English manufacturer of five years ago. A few years since, our dyers were entirely unable to compete with the English and French dyers; now they are surpassed by neither. Instead of wearing American cloths from patriotism, we do it now from choice; they are better than foreign cloths of the same cost. Examine the cotton and other fabrics, and it is with some difficulty you can believe that they are the product of American looms.

Our improvements in hardware and cutlery are equally great.—What surgeon now thinks of sending abroad for his instruments? What tailor for his shears? None; they are better made at home. Look at the ladies' hats now in this room; what leghorn can equal them in beauty or quality? Who now sends to England for cut glass, and what but the emulation arriving from our fairs has reduced its value to the present low prices? Some of the best specimens in our exhibition are brought from beyond the Alleghany mountains by the manufacturers. Look at the girandoles and candelabras before you, and recollect the entire impossibility of procuring such goods a few years since.

The great benefits of our fairs are overlooked by the public at large; they bring together improvements from all parts of the country, and enable manufacturers visiting us to ascertain where they are excelled, either in quality or beauty. The improvements in any one part of the country are made known to all other parts; the wants of the community are conveyed to the manufacturers, and competition for our premiums secures improvement in the quality of workmanship.

Those visiting the fair are too apt to pass by the articles exhibited without giving them proper examination, and thus suppose they are only seeing duplicates of the Broadway stores. This is unfair, both to themselves and the manufacturers. Let them examine each article critically, and they will find yearly improvements, both in quality and beauty.

How many manufacturers would be for ever without a market were it not for our fairs. Here the dealers see the articles, and ascertain the names and residence of the makers, and thus sellers and buyers are brought together for their mutual benefit.

The improvements in stoves for burning anthracite coals alone, has made a greater saving to the country than the whole amount paid by visiters at this and all other fairs.

Where can youth receive better instruction than at these fairs? Here, they not only are excited to ask questions, but in many instances they see manufactures and machines in operation, with persons in attendance to explain them. Every article before you has its use, and any improvement in its quality or reduction in its price are equally beneficial to every inhabitant of our common country.

With all these facts before you, is it possible you can for a moment doubt the great usefulness of the American Institute? Is it not worthy your fullest endeavors to sustain it? You, perhaps, may desire to know the manner in which its affairs are conducted. We refer you to our published statements, which always appear in the public prints soon after the close of each fair. By these you will learn that the officers and directors receive no compensation for their services, that the superintending agent and his clerks alone are paid, and that for the first seven years of his labors he received no compensation.

Look at the amount of labor performed and responsibility assumed by our managers; the obtaining all these articles for exhibition; the endless numbers of circulars and letters to be sent all over the country to obtain them; the selecting and appointing of several hundred judges, and the consequent labours of the premium committee in investigating their reports and awarding the premiums ; all this is done without charge or reward, other than knowing that they are serviceable to the public at large.

Some of the public papers have asserted, that a large proportion of the receipts at our fairs were spent by the managers for useless refreshments. This charge is as false as it is ungentlemanly. The whole amount spent for the refreshments used at our last fair is less than ten cents per day for each individual devoting their time to the business of the fair, and even this sum would not be used were it not to secure the presence of these individuals at the fair during the whole day, instead of their occupying an hour each to go home to their meals. Every dollar received is devoted to the legitimate use for which it is given, and no gift of the public is better applied for the general good.

To this city the fairs are of incalculable benefit. Look at the books of the hotels during the continuance of the fairs, and you find them all filled. During the two weeks the fair is usually opened, it is computed that 100,000 persons visit the city for the purpose of seeing the fair.

Under these circumstances we call on our citizens to use every endeavor to advance the object of our Institute, and their assistance will not be misplaced.

(G.)

Agricultural Address delivered during the 18th Annual Fair, by the Hon. H. Meigs, Recording Secretary of the American Institute.

Ladies and Gentlemen :

The American Institute, in its wish to provide on this occasion such an address as would find favor in your judgments, had, on looking around our Republic for one capable of so delightful and instructive an address as would have deeply interested you in these most pure and most useful subjects, invited the aid of the Hon. George Lunt, of Newburyport, whose richly stored mind would have poured out before you the true immense values of the farm, and also would have graced with all the garlands of poetry the glorious regions of the flower garden. The Institute, with great regret for his unexpected indisposition, has directed me to exert my humble ability to fill the void thus produced. In prompt obedience to its direction, as an ardent servant in the great cause to which the Institute directs the greatest portion of its energy, I am honored with the task of delivering to you the views of the American Institute in relation to these subjects. I beg your kind indulgence while I make the effort, assuring you, that if I should fail in pleasing you, it will not be for want of enthusiasm in the cause.

Ladies and gentlemen : Let me begin by borrowing from the greatest man that ever lived, from our own dearly beloved Washington, his opinion of the Agricultural cause ; an opinion among the very last communicated to his fellow men. That opinion, contained in his message to Congress in 1796, was, That the Government of this Republic should then establish a separate Department for Agriculture ; that the purse of the nation should be freely employed in the cause. He entreated Congress to establish a *Home Department for Agriculture.* The American Institute is now, and has been for some time past, engaged in awakening the vast farming interest of this country to the fulfilment of *Washington's wish.*

He knew, and all great men know, that the cultivation of the earth is our very first and our most delightful duty. *That Paradise lost by transgression* can only *be regained here on earth* by the sweat of our brows, in clearing away thorns and briars, and causing our vallies to show forth their golden harvests, and our gardens to blossom with roses. All savage life is without agriculture worth any notice. All *semi-wild* existence is without a garden. By due care and exercise of intelligence, animals of a wild nature are subdued to domestic habits. Man, in the pride of his high standing, *as one created in the likeness of God*, is capable of subduing all things on earth to his own uses. He flies on the back of the horse. He rides the enormous elephant in triumph. He makes the little ox of former ages, weighing not more than three or four hundred pounds, weigh *five thousand.* He will now get *from one acre a thousand bushels* of valuable roots. He makes the desert soils become cultivable fields and gardens! He will have the earth bear a thousand happy beings where it bore but one unenlightened savage! He will now travel through his farms and gardens at the speed of forty miles an hour, and he prints the *Holy Book by millions on millions by the same steam power by which he flies!*

Happy are we to be in this period of time, when the *temple of Janus is truly closed;* and when *those of the Almighty* are hourly rising from the ground, all through the civilized world, and unfolding their portals to a happier race.

No man ever wrought in the field or garden with his own hands, without becoming *more or less purified by the work.* God has commanded it, and he has blessed it. In all that man does, except in the farm and garden, remember that he can, if he will, *commit forgery. But in these he must be true.* He has no art, no magic by which he can *simulate a flower, a grain of wheat, or an ox!* Be the evil spirit in him what it may, in all these great productions of Almighty power, as the agent of that power, he is *compelled to be true.* Nature will not obey the evil spirit, and enable him to tell you a falsehood in these things. The very man who will sell you *chalk and water for milk*, cannot sell you *rye for wheat, a violet for a rose, or a sheep for an ox!*

Call up from the records of men those names which cannot die, and you will find them all of one mind as to the culture of the earth. What is the rule of that venerable empire at our antipodes : Chinese emperors have been always bound by a custom of several thousand years, to appear in the field at the opening of every spring, and in the presence of the first men of the empire, *take hold of the plow and run the first furrow !*

Cato of Rome always cried aloud to the Romans, go to your fields and work them with as much energy as you would meet the enemy in battle! The most beautiful poet of ancient days, Virgil, wrote two works that will never die. One on the management of stock, his *Bucolics*, (meaning care of cattle)—the other the *Georgics*, *Agriculture.*

At the era of Virgil, Rome had attained by her power the command of an hundred millions of men. That was the *memorable Augustan age !* the real achme of Roman glory. Thus you perceive that the beloved poet of the day, the truly admirable *Maro*, devoted his rich mind first to the *raising* of *cattle !* secondly to *Georgics*, or agriculture ; and lastly to the History of Rome's infancy and father Æneas

Such then was the imperial taste of Rome. She had, by following the just and noble precepts of Cincinnatus, Cato, Virgil, Varro, Columella, of Theophrastus of Athens, and others of nature's noblemen, *established virtue* in her people. Virgil states the maxims of *much cattle much wheat ? Cull from your seeds and fruits always the very best. Spare not your sturdy labor upon the soil.* Italy can be forever maintained as a garden by *manure of much cattle*, and by constant labor. *Steep the seeds* of your plants in *nitre* and the *lees of oil.*

Select the very best cattle to stock your farm. *Kiln dry* your grain before you grind it, and it will be more wholesome. *Mow your grass while the dew* is upon it. Agriculture is noble. The dictators of Rome maintained themselves from a few acres by their own daily labor. By such men and such means, says the Roman satirist, Juvenal, *all the men of Rome were brave and strong*, and *all the women chaste!* The empire grew to the enormous community of one hundred and twenty millions of people.

Thiers, in his Philosophy of History, has recently beautifully illustrated *this manhood* of the Roman people, and also the causes of its fall, Men grew proud; they began to disdain the labors of the farm; they chained their captives, and compelled them to labor during the day; and *at night*, says Columella, the best method to manage such an *obstinate race* is to have a cellar with a strong deck over it, with a hole therein just large enough *to let out one man at a time*. These captives were much larger than the Romans, and required great care and severity to render their services available in the labors of the field. Cicero, the eloquent Cicero, had *ten thousand* of these *white, fair-haired, blue-eyed slaves* upon his own estates.

This system could not endure, and poor Rome soon felt, by turns, the horrors of famine. The world was ransacked for grain to feed the Roman people. Egypt, Sicily, Spain, every colony was compelled to send its grain to Italy. On one occasion the emperor, excited by the cries of the famished citizens of the imperial city, on account of the much delayed arrival of grain, in a public and solemn manner, in the presence of the people, vowed to the gods, that unless the grain to feed his people should arrive within three days, he would (showing it) plunge that dagger into his own bosom.

The grain arrived in time to prevent the sacrifice. *The glory of nations, their virtue and their high agriculture,* ARE THREE INSEPARABLE FACTS!!

What was England for fifteen hundred years? Her history will show you, that her population never exceeded six millions during all that time. In 1509, gardening began to be of some importance in England. Before that time vegetables were imported from the Netherlands. Then began the culture in England of cabbages, gooseberries, musk melons, apricots, garden roots, &c. The damask rose was introduced by Dr. Linacre, physician of Harry the 8th. In 1526, roses were first consecrated as presents from the Pope! Hops from France! Pippin apples, by Leonard Mascal, in 1525. Corinthian grapes, now called currants, from Zante, in 1555. Musk roses, and several plums from Italy, by Lord Cromwell. *July flowers*, and carnations, in 1567. Tulips from Vienna, in 1578. Asparagus, oranges, lemons, artichokes, cauliflowers, beans, peas, lettuce, in 1660. Then began the population of England to grow. Then began the *creation of the farmer*. Then arose the *delightful dwellings of the yeomanry* of England, on the domains which, for more than a thousand years, had been occupied by feudal vassals, styled in the old law books *villiens*, over whom, in their subject condition, the *eleven hundred military castles of England have for so many ages frowned in aristocratic power!* Now behold the magic changes wrought by the power of farm and garden. You see now the annual jubilee of these noble interests, attended by all the gentlemen, lords and ladies of the British empire. Victoria, (to her credit I proclaim it) personally shows to her subjects the example of *love and regard for even a poultry yard!*

Turn your eyes to France! Louis Philippe is the protector of the Royal Society of Horticulture, of Paris. Thus giving his fine example to all our patriotic citizens who are now so nobly engaged in forming every where *Farmer's Clubs;* which, by thus condensing the *theories and experience* of *masses of men*, will find those truths which are vital to a powerful progress in agriculture, as well as in any other cause. See the Sultan of Turkey within a few months past sending commissioners into every district of the Mussulman empire, to inspect the condition of farmers, to *lend them money* to buy stock and farming tools, to give them the most valuable seeds, *and ordaining that no man while engaged in cultivating the earth shall be arrested for debt!!*

Look for a moment at the value of cultivation! Spain for a long time annually received from her mines in South America some thirty millions of dollars in gold and silver. Spain, which had before that time a rich agriculture and a lofty name, now became proud and lazy; her *Hidalgos, with pompous step,* paced the prados of her cities, *disdaining all labor. Spain dropped* her *spade* and *hoe—spurned* the *plough*—and you all see the result.

England, by her parliamentary returns last year, shows the value of her agriculture for that year to be *three thousand* millions of dollars; or as much in *one year, as the mines of America had given Spain in a hundred years.*

Even France, so renowned for her civilization, has not yet redeemed the land from the original curse. Poiteau put a question last July, to the Scientific Congress of Rheims! How is it that France gathers but *six or seven grains for every one sowed*, of her grain crops?

The Emperor of Russia is now seeking an exchange between his Farmer's Clubs and those of all the world.

As for our own immense continent, which we have an *indisputable commission to subdue and to till*, let us for a moment try to look at it as it will be in the lifetime of hundreds of thousands of our children. Think, if you can, of the future farms and gardens bordering the two hundred thousand miles of river banks of this republic! Think of that glorious variety *due to the climates*, *all of which*, from tropical heat to the northern cold! from the low levels to the lofty plains! Of the myriads of sheep browsing on the sides of your yet untouched chains of hills and mountains peculiar to that fleecy race. See your improved breeds of oxen, by millions taking the place of the buffalo on your mighty western plains, fit for your markets when weighing from two to *five thousand pounds* each. See your acres by the *genius of chemistry*, and perhaps by electricity, united with the well instructed and persevering industry of the cultivator, bearing, not the French *six and a half for one*, but *ten times that amount*, of the purest wheat.

See your roads and division lines, marked, not by *choke pears*, sour apples, and poor nuts, but by endless rows of the hundred varieties of most delicious pears, apples and nuts. I mean by the latter, Madeira nuts and others, including the finest walnuts, which may just as readily be grown as the bad ones.

See every farm-house and cottage, with its silk growing department. See the pound weight clusters of choice cultivated grapes, in the hands of every boy and girl! And remember that by the movement, on railroads as it *soon will be*, you can *safely* pass through a thousand miles of such a country, in two or three days! Every market of the Northern States may be supplied daily with the fruits and flowers of the tropics—and the invalids of either climate will be transferred with comfort to any position advised by a physician. On the appearance of threatening storms, the patient will be sent, *faster than the gale*, to a better clime, imitating the birds who *flee before a tempest and keep their feathers dry!*

Ladies, allow me in the enthusiasm of the moment, to turn your attention to the future cultivation of flowers. They belong to you of ancient right. Their lovely goddes is one of you, Flora! *We have not yet begun to see a field of flowers!* Botanists have made mighty additions to floral wealth, by searching most parts of the earth for specimens. But up to this time, they have only designated ONE

QUARTER OF A MILLION OF PLANTS! All these have flowers, and all are susceptible, by *knowing* and careful treatment, of greater variety and increased splendor. How much have you admired the newly cultivated Dahlia of Mexico! You perceive that from seedlings of single petals, and humble tints, art has already *quilled them,* and *painted them*, until they form rosettes of such splendor as no ancient king or queen ever wore upon the breast.

France is cultivating pinks in a manner we yet do not see here. That fragrant little flower, of cinnamon fragrance, has already been varied hundreds of times in forms and colors. You all admire carnations. In future days the pink garden will be of itself a delicious treat.

Roses are constantly becoming more varied by art. Already there are more than a thousand different roses Asters (stars) are becoming of distinguished beauty. Tens of thousands of these lovely flowers were combined in one floral edifice, exhibited in Boston a few days since by the Massachusetts Horticultural Society. But we have only commenced, Ladies, the adorning of our gardens with flowers.

The lovely race of violets demands your attention. See their *eyes*' (for so they seem,) *all turned to the south with one accord.* Seldom have we seen a more lovely sight than a thick bed of these *heart's ease*, all eyes looking to the south! Who can fail to enjoy the sweet pea? what a delicacy of growth its stem and flower present, and what a delicious perfume breathes from its modest petals!

Ladies, you have seen the festoon rose bushes, natives of our own land. Can any thing excel their loveliness? branch after branch stretching out to ten times the lengths of other rose bushes, and all loaded with their delicious *American flowers!* They have but just made their appearance in some of our court-yards and gardens. *Take care henceforth*, that you enwreath your fences and trellises with this *native roseate garland!*

And there is another floral beauty, which once enraptured even the *most insensible* of men. The tulip has been made to show all the colors of the painter's palette with the most admirable forms of *etruscan vases!* It has been grouped on beds by garden side-walks, in tens of thousands. A single one has once been sold for an hundred guineas! But, Ladies, there are yet uncultivated flowers of unknown beauty, to be developed by the care and skill of gardeners, to thousands in number. And do not fail, Ladies, to examine the flowers with a powerful microscope. You will then find your admiration of them elevated to adoration of God, who elaborates their rich colors and their perfumes *from the brown earth* on which you tread, and from the *air and light!* Their magnified beauty is indescribable.

Let me, while I now enjoy the gratifying opportunity, in behalf of the American Institute, ask you to take care of the realm of flowers! Maintain *its power over men along with your own*, to soften and render that *harder subject more and more civilized!* To meet him when he comes from the sturdy toil of the field, with a bouquet of lovely flowers; and your *yet more enchanting smiles. Without you and the flowers he is indeed but a savage!*

You cannot fail to observe that there is an intimate sympathy between the religion of men and the honest and delightful employment in a garden. It is almost a certainty that the garden of the country clergyman is a good one. In that alone, of our temporal concerns, we perceive at once, that the spiritual pastor *is at home.* Innocence, health and cheerfulness are nurtured, and flourish in the garden. He cannot be a lawyer, a merchant, or a politician, without impropriety; but a garden is his *natural home;* and happy the pastor who, by early rising and proper labor in it, prepares his mind with its purifying influences, and his body by the physical energy which it infuses, to labor in his holy calling, for the eternal good of his congregation.

The American Institute, in carrying out the great objects of its charter, has devoted much of its time and ability to the main good—Agriculture. With a view to gather wisdom from numbers, it has called a convention of farmers, gardeners and silk growers, from all quarters of the land, to meet in this city this day. This assembly will again apply its force to the establishment of an Agricultural Department of Government. The members approach that subject with the last best advice of the illustrious Washington to us, couched in the following terms, " It will not be doubted that, with reference either to individual or national welfare, agriculture is of primary importance. In proportion as nations advance in population and other circumstances of maturity, this truth becomes more apparent, and renders the cultivation of the soil more and more an object of *public patronage.* Institutions for promoting it grow up, supported by the *public purse? And to* *what object can it be dedicated with greater propriety?* Among the means which have been employed to this end, none have been attended with greater success than the establishment of boards, composed of proper characters, charged with collecting and diffusing information, and enabled, by *premiums* and small pecuniary aid, to encourage and assist a spirit of *discovery* and improvement, by stimulating to enterprise *and experiment*, and by drawing to a common centre the results everywhere of individual skill and observation, and spreading them thence over the whole nation. Experience accordingly has shown, that they are very cheap instruments of *immense national benefits.*

One great national object to come under the care of such a department, will necessarily be the culture of silk. Human experience has taught us, that in all the immense variety of articles afforded by nature for human comfort and convenience, there is no one thing connected with the clothing of our race *more to be cared for* than this beautiful article. What utility as a thread! what splendor as a garment! Already no human being is dressed to its satisfaction without some silk. Once more valuable than gold, and worn only by the upper classes of society, now it begins to form a portion of dress for almost every human being. An immense experience has proved its high value; and the millions of dollars which America annually pays to Europe for it—while America ought to let Europe pay us for it—urges us to the culture of this great staple. France says that silk can only be raised in small quantities by individual families That our reliance for its production is absolutely upon that nice division of labor in which some one or more of those members of a family who are unable to do the more severe labors of the farm, *must have a cocoonery.* By an universal application of this rule—*and there is no other*—a nation can not only supply itself, but spare much for other nations.

And here allow me to repeat what is perfectly admitted by our silk conventions. That, by a happy adaptation as to climate, America is more enabled to supply silk than any country on the globe, not excepting China; the only one which possesses the like fitness for that purpose. I refer you to the report of facts on this point, made by our silk conventions.

I feel authorized to declare, that the American Institute feels no truth as being better settled, than that our continent can and ought, in justice to the natural qualities with which our Creator has endowed it, to be *the greatest silk growing country on the face of this globe!*

But I console myself—although I shall not see it, perhaps—that the day will soon come, in which this happy land of ours *will receive* for her silk alone, fifty millions of dollars a year.

Let no man be discouraged in his efforts to make the soil of this country productive! Industry has a power which may almost be deemed magical. Who would expect, from the *granite hills* of Massachusetts and of Maine—looking, as they do, as if in the tremendous upheavings of a deluge, they were *rocky waves suddenly cooled while yet they were rolling* in that transforming revolution of the surface of our earth—who would look to see those rocks, lately bearing but *mosses* and *shrubs*, when struck by the wand of *Pomona* and of *Flora*, (as Moses smote the rock for water,) pour out flowers and fruits like *Damascus* or *Canaan!*

I saw that triumph lately! and like victories will be achieved over all our most obdurate fields and hills by our posterity.

Omnia vincit labor. Labor conquers all, must be inscribed on our standard.

Ladies, permit me now to say in parting, so long as your smiles shall cheer the ardent laborer in the great cause of American industry, depend on it, that ardor can never cool! And we of the Institute invoke those smiles as our greatest reward for our own labors.

As to you, men of America, for us to urge you to persevere with unrelaxing energy in this mighty cause, which is fast bearing upward our beloved native land to the loftiest heights of wealth and power, and glory! I would as soon, standing on the banks of our cataract of Niagara, tell that *vast headlong torrent* to *go ahead!*

(H.)

Address delivered during the 18th Annual Fair, on American Progress, by H. C. Westervelt, Esq,

The return of the present anniversary of the fair of the American Institute, is a convincing proof of its stability and enterprise, and an additional evidence of its character and importance; and like the faithful steward, she presents herself before the public, adding new talents and new treasures to the numerous works of utility and enterprise, which have before grown up under her fostering care. And while articles of ingenuity and invention are rapidly springing up in every quarter of our vast republic, this noble Institute takes them by the hand, and charitably guides them to the road of competition, encouragement and success.

And although many a useful project may have been too early abandoned by the inventor for want of a proper introduction to the community, yet it can not be said with any appearance of truth, that here, in these exhibitions, or by any impartiality of this corporation, that their merits have at any time been passed over in silence or wilful neglect; but, on the contrary, every exertion is made to add strength and credit to mechanical skill and agricultural industry, and to give an impetus to the innumerable creations of domestic invention. In fact, wherever we may turn, either here or elsewhere, we have reason to feel extremely grateful for the improvement in every branch of home industry and domestic manufactures.

If we go to our colleges and schools, we find that the principles of education, and the manifold varieties of knowledge, are gradually becoming more and more developed.

Industry and enterprise obtains the ascendancy over sluggishness and error, and the way to science, once obscure and doubtful, gradually becomes more plain and simple.

Sciences are reduced to systems, and systems in their turn, are reduced to the comprehension of the plainest understandings.

But these, like every thing else, are not properly attained unless by ceaseless labor and pereseverance ; and like every thing which is susceptible of an intrinsic value, they are usually worthless without the physical and intellectual industry necessary to their accomplishment.

Genius, it is true, may sustain and enliven every thing within its sphere ; but it is only where true knowledge is at the foundation, that genius proves of any real advantage to its possessor.

Thus we see that it is labor, hard labor, which is the great lever which invigorates and gives an impetus to the moving principles of life.

It is labor which fills the granary of the husbandman, and affords us our daily bread. Labor speeds the plough, it enriches the soil, it improves the farm, and is the source of wealth to those who venture to approach it. Labor is the vital principle of the manufacturer, the sustenance of the artisan, and the gold mine of the mechanic. It is the keystone to the fortune of all professions, and it exemplifies its merits in the pulpit, at the forum, and in the invalid's chamber.

Labor builds our cities, it constructs our ships, it digs our canals, it makes our railroads, and throws into the lap of commerce the accumulations of its toil and industry.

Labor hews the rough marble, and from the dull mass awakens order, symmetry and beauty. It breathes into life the artist's dream, and spreads upon the canvass the history of his fancy. It adds to our comforts, contributes to our pleasures, and is our natural friend in every situation in life.

If we take but a glance at the contents of these halls, we are made sensible of the force of industry and the pride of labor. You here perceive that to the power of human contrivance, we are indebted for every luxury worthy of our enjoyment. It is here, too, we are made to realize that man, with all his weakness and with all his vanity, is yet the object of wonder, and the subject of admiration to his fellow man.

But while man has performed even more than wonders, much may yet remain to be accomplished. New discoveries may be made, and old ones may be improved upon ; and although all these productions now before us may appear in the highest degree perfect, advancement, aided by industry and research, may so far progress as to create surprise at some distant day, as to how little we formerly knew of them.

It is not unreasonable to conjecture, that the ordinary method of transportation by horses, may be done away with altogether, and that the slow-moving plough may eventually leave its furrow in the field, by the " go ahead" application of the steam engine. At present, however, we have no inclination to speculate.

When Fulton successfully attained a speed to the steam-vessel of some six miles the hour, or when Trevithink attained for the locomotive about the same average, general opinion would naturally have hesitated at the lightning-like velocity which both have realized at the present day. Ingenuity and enterprise, it would seem, have nearly perfected the works of the immortal names of those who first planned, projected, and built up these noble evidences of thought, for the promotion of civilization, and the advancement of every stage of human society ; but we repeat again that much may yet remain to be accomplished.

Without disputing who did or who did not first ascertain the advantages of steam navigation, whether we ascribe it to Fitch and Fulton at home, or to strangers abroad, it is nevertheless certain that every effort to propel vessels by steam anywhere than in the United States, had most signally failed ; and it was not until Fulton turned waterman and his experiments were triumphant, that steamboats came into general use in Europe.

To such a laborer in the vineyard of American enterprise we cannot allude too favorably. In fact it is a general fault with the community as well as with individuals, to lose sight of the main spring which keeps the wheels of industry in active motion, and to forget the cause which first introduced them to vitality and usefulness.

We have had our skilful mechanics, who have given evidence of masterly ability, who have benefitted what was before unimproved, and who have honored themselves and their countrymen by the force of their enterprise ; but none of these should expect, nor can they receive, that voluntary tribute of gratitude and respect which Americans universally ascribe to the great spirit of steam engines.

The brief space to which these remarks must necessarily be limited, will admit of but a cursory glance at a few of the leading facts connected with the biography of Fulton, and steam navigation.

Robert Fulton was not a man of ordinary mould, for if we deprive him of the imperishable honors with which the application of steam to floating vessels alone has invested him, there is still enough left of his merits to fulfil the career of a more than ordinary character.

It was to his exertions that our countrymen were indebted for the possession of several of the select paintings of his friend and tutor, the admirable West.

The quarto edition of Barlow's Columbiad contains a number of spirited engravings, which at this age of improvement rank among the highest in the fine arts. Several of these are the designs of Fulton, and were introduced to notice by his patronage and address.

Fulton also procured patents for a double inclined plane, for mills for sawing marble, for machines for spinning flax and making rope, and was the inventor of a method for excavating canals and tunnels. He projected the first panorama in Paris; and as the inventor of a practical scheme of sub-marine warfare, he became during the late war the object of terror to British navigation.

If we look back to those days of primeval simplicity, when steamboating was in its infancy, when the Chancellor Livingston left the old red fort on her voyage to Albany—when the fare was ten dollars—when the roar of the steam was like the roar of the cataract—when the captain gave his orders through the speaking trumpet—when the ringing of bells was not in vogue—when the departure of sloops and steamboats on the Hudson was announced by the sound of the bugle; when the pine wood of the smoke pipe kindled a blaze reaching to the skies, and man hid away in terror at the sight of the flying nondesript; we regret to find connected with many agreeable reminiscences, the results of erroneous prejudice, and the sneers of the ignorant and the vulgar.

It was against these latter qualities that Fulton was obliged to contend; contending, however, in that manliness of spirit which suggested a conviction of the right, and the perseverance to accomplish it. Since then, time and events have substantially proved to us, that the old fashioned spirit of safety and the fireside, is not always an advantage to the progress of the world. For ourselves, we envy not the manners of those who claim a kin to the 13th century, whose ideas are in unison with the dark ages, and yet who have always exercised a sufficient influence to stamp every improvement with the black seal of folly and insanity.

Our countrymen, therefore, cannot too highly respect the history of the late Chancellor, Robert R. Livingston, who seconded the plans and contributed his fortune in sustaining Fulton, in the accomplishment of his great designs, and that, too, when public opinion was against the hazard of individual means, and when the advancement of the sciences were liable to be stopped by the sword of war.

We extract a short synopsis from Colden's entertaining life of Fulton, of an account of the first steamboat from New-York to Albany, and we flatter ourselves, at this distance of time, it may not be altogether out of place.

" The first American steamboat, called the Clermont, was built and launched in the spring of 1807, from the ship-yards of Charles Brown, on the East River, and was completed in the month of August, with an English engine, and moved from her birth-place to the Jersey shore. Mr. Livingston and Mr. Fulton had invited many of their friends to witness the first trial, among whom were the late Drs. Mitchell and Macneven. Nothing could exceed the admiration and surprise of all who witnessed the experiment. The man who had thanked his stars that he had more wisdom than to waste his money on so expensive a machine, now changed the smile of contempt for that of wonder and admiration, and the triumph of genius extorted from the multitude which crowded the shores, shouts of congratulation and applause. The Clermont soon after sailed for Albany, and arrived at her destination without accident. She excited the astonishment of those on the waters and on the shore. She used dry pine for fuel, which sent forth a column of ignited vapour many feet above the flue, and whenever the fire was stirred, a galaxy of sparks flew off, and in the night gave a brilliant and beautiful appearance.

" Notwithstanding the wind and tide were against her, the crews of other vessels saw, with astonishment, that it was rapidly approach-n g them ; and when she came so near that the noise of her paddles and machinery were heard, they, if the newspapers of the times be true, in some instances shrunk beneath their decks, while others left their vessels to go ashore, and there besought Providence to protect them from the horrible monster which was marching on the tides, and lighting its paths by the fire which it vomited.

' Fulton himself was a passenger on this voyage, and in an account of it which he published, states that he left this city at one o'clock on Monday, and arrived at Clermont, the seat of Chancellor Livingston, at one o'clock on Tuesday—time 24 hours, distance 110 miles. On Wednesday he departed from the Chancellor's at nine in the morning, and arrived at Albany at five o'clock in the afternoon, distance 40 miles, time eight hours ; completing the journey by the steam engine alone in thirty-two hours, equal to nearly five miles an hour."

When we compare these singular facts with those we have more singularly realised at the present day, we have reason to pause at the rapidity of our success ; and could Fulton himself again return to the earth, and witness the rapid performances of the steam palaces at this age, he might be prompted to smile at the dawn of a project which he probably never supposed would have surpassed the glory of the noonday. And whatever may be said of the ingratitude of republicans, we at least have no hesitation in expressing our belief, that if the merits and services of Fulton were not sufficiently appreciated in his own day, the time has at length arrived when his memory finds a cherished home in the bosom of every friend of national industry.

We have thus far alluded to the life and accomplishments of Robert Fulton, to fortify us in the assurance that the mechanic arts open as clear a field to an imperishable fame as the pursuits of those who adorn the hignest seats of professional learning ; and although the financial policy of Alexander Hamilton was of invaluable importance subsequent to the revolution, nevertheless the fact is admissible, that the genius of Franklin, and the practical and mechanical knowledge which originated with De Witt Clinton, were infinitely superior.

The prosperity of our commerce grows with the growth and increases with the strength of America. For intelligence and influence it is scarcely necessary to say, that our merchants rank with every nation of the globe, while our mechanic arts assume an enviable position, when held in comparison with the best labor of other countries. With the finished vessels hourly sailing from our ports, with their beauty of architecture, perfection of model and improved speed, commerce is not destined to languish, nor can the mechanic find room for leisure or discouragement.

In fact it is the mechanic's arm which brings about the successful results of talents and enterprise, and it is the existing distribution of labor and patronage, which is destined to perpetrate our thriving republic. It is the one general unison of feeling and interest that points the way to an endless national existence. There is a pervading spirit of liberality and influence, which is properly fitted to reward the productions of native talent; and, in a word, society is so blended, and yet so uniformly constituted, that the energies of wisdom and industry are destined to repose neither in obscurity nor idleness.

As we advance in the progress of our national strength, these energies are called into action, true merit becomes fairly appreciated, and undoubted genius finds its true and elevated position.

To substantiate these facts, we discover an illustration in the jealous deportment of foreign nations, and especially in Great Britain, in their recent reviews of the progress of American improvement.

To England be the credit and the renown, resulting from her success and her boastings. Apart from native prejudices, we are disposed to award her the privileges resulting from her achievements in steam-navigation, while we are reminded that assurance alone has frequently succeeded in placing its votaries upon the pedestal of fame, which modest merit and original talents never justified it in reaching.

By reference to the chronological summary of an old almanac, printed in Albany, by the late Solomon Southwick, may be noticed the following memorandum: "May, 1819. The first steamship sails for Europe." And by further reference to British authority, we find that the steamship Savannah was launched in New-York, sailed from Savannah, under command of Captain Moses Rogers, on the 25th of May, 1819, and arrived in Liverpool on the 20th June, 1819, making the passage in twenty-six days, from land to land.

It is very certain that in this age, this would be considered rather slow progress, but we presume it was well enough at the time it was accomplished; and it is also very certain that the steamer Great Western has since proved to the world, and the propeller Princeton has since proved to the Great Western, that the journey may be performed in about one half the period.

But if we may have reason to be satisfied with our success on the Ocean, it is no less gratifying that our internal improvements are widely spreading themselves in every section of the Union. While canals have extended through many settled portions of the country, affording a valuable and economical mode of transportation, which no other mode of communication would as effectually supply, the ports and harbors on our lakes and rivers are approached by an endless variety of sailing vessels, and the speed of the locomotive carries us over extensive railways, through our rising towns and cities, beyond the western forests and prairies.

And it is with the warmest congratulations we extend to one and another the hand, with the consciousness that our government is untrammeled in all its complicated movements, and that we are freemen. We rejoice in the conviction that we call no man master, and that we reverence the title and lineage of neither gentleman nor scoundrel.

Living in a consistent equality, with a government separate from the affairs of the church—every man quietly pursuing his own vocation—professing his own religious creed, and enjoying the consciousness that his home is his shield and castle of defence, we have reason to conclude that we occupy an enviable position among the nations of the earth.

Our courts of equity display the emblems of literature and learning. Justice goes hand in hand with truth and mercy. The skill of the mechanic is brought from darkness to light, while it cherishes and ennobles his ambition, and gives evidence of the truth, that in whatever situation man may be placed, the chances of immortality are within his grasp.

The farmer wields the sickle and scythe, and sows to reap a bountiful harvest.

Peace and plenty smile around and about us. Our noble Union is insceperably bound with its golden cord. Liberty dwells within every heart; prosperity exists to encourage and gladden us; and go where we may, from the Equator to the poles, from the Atlantic to the Pacific, the title of an American citizen is a passport of respect and attention.

(I.)

Anniversary Address delivered before the American Institute during the 18th annual fair, by the Hon. T. D. Eliot, of New-Bedford, Mass.

Mr. President, and Gentlemen of the Institute:

There is in the history of the past, this suggestive custom recorded;—In one of the cities of Peleponnesus at certain times all the inhabitants assembled. They divided themselves into three large companies, of the aged, the mature, and the young. Each had its speaker. When they had gone in procession through the streets of the city, and before yet the games began, a scenic exhibition was prepared, in which each company took part.

And first came forward the old men, whose years were well nigh numbered. They had fought their fight. The toil of life and all its honors, were things of memory. The high endeavor, the reach for fame, the senate, the battle-field! as they looked back, it was the past that told of them.

Sadly, for it was past; but proudly for it had been, their voice was heard—

"We have been in days of old,
Wise and generous, brave and bold."

Then their sons, the active men, whose manly arms and matured minds sustained the state, came forth, and as they cast their eyes around them, in the consciousness of present strength, they said

"That which in days of yore ye were,
We at the present moment are!"

And having spoken, they gave place, and the children presented themselves upon the stage, their young hearts untouched by disappointment, their faces full of hope and bright with joy; and with clear voice, their vows were offered,

"Hereafter at our country's call,
We promise to surpass you all!"

There was much meaning in this brief play. The past, the present, the future, were thus brought together. The achievements of the fathers, the living power of the sons, the promise of the children. What the state had to remember, what to depend upon, what to expect! It was the voice of years gone, addressing the present; inciting to a growth in wisdom, and to surpassing deeds of valor, which coming years should witness, and with which they should be crowned. There was, it is true, one purpose shadowed forth in which we may not sympathize; for all that is of war, is uncongenial here. The dust of the field, not of the camp; the sickle, not the sword; bleaching powder, not gun powder; "mechanic powers," not armed forces, betoken our pursuits, for in them are our reliance and our strength. Our national history a single life may well nigh compass. But that brief past has laid us under obligations to the future, which must be recognised. From time to time these obligations should be considered. Nor can more suitable occasions offer than when at the close of these festive gatherings of the friends of domestic labor, we meet to take our annual observation, and make a new departure. Our position as a people is peculiar. But yesterday, our fields were forests. The axe has levelled them, and the sword secured to us their use. The generations which have passed away had their duties, and have performed them. Ours are to be performed, and their performance rests with us, and with us alone. These duties are of a character which the past has in some respect defined for us. And this will always be more or less observable, for in each age the point of progress attained, indicates a further point to be attained, and somewhat opens the path to be pursued.

As in journeying over mountains, the traveller looking beyond him upon his winding road a few feet, sees the bold hillside obstruct his path, and knows not whither his true course lies, but shall quickly find as he goes on, that the road just travelled will itself disclose the outlet; so to each generation the great duties of life which are to be discharged, are made plain by the progress of the past. The work of the past has been completed; but our inheritance was costly as it is rich. Those who bequeathed, purchased it at no small sum. The ties of blood sundered, the home and the hearth stone left, accustomed comforts put away, an untrodden wilderness and unknown foes encountered, life perilled for uncertain good—these made up the first cost. But the outlay did not end here. What was sought for conscience sake and had been gained, could not lightly be parted with.

The strong arm must defend what the strong heart achieved. Again, the ties of family were severed, and under auspices which promised success to those alone who knew that "difficulties show what men are," the responsibilities of freedom were assumed. Less than seventy years have elapsed, and what a work has been accomplished. In every department of industry the great results of labor are enjoyed. Agriculture, the oldest and the purest of human callings, has drawn to itself the awakened mind of those who till the soil. Throughout large portions of our land no stream can pour itself idly into the sea: upon its banks the busy man has planted himself, and makes available its waters. The quick noise of machinery is heard, where but few years ago no sound disturbed the silence which nature keeps where man has not approached. The accumulated labor of the farmer and the manufacturer, the merchant receives, and the freighted ship bears the large surplus to foreign lands, whence other products may be returned for their consumption. Where manufactures flourish, and the field is ploughed, and the sails of commerce are spread, the mechanic arts thrive. The inventive skill of a people, is in proportion to the call which is made upon it. When, a few years ago, our countryman whose stern will has compelled the lightning into subjection, sought to exhibit before you the proofs of his strange power, his insulated wires were laid beneath the waters conecting Castle Garden with Governor's Island. It was a moment of keen interest for him and for you. But as he was yet beginning, a vessel by accident destroyed a portion of his conductors, and the experiment failed. "In the moments of mortification," writes Professor Morse, in a sleepless night I devised a plan for avoiding such accidents in future, by so arranging my wires along the banks of the river, as to cause the water itself to conduct the electricity across." Curiosity induced Franklin to fly his kite. He wished to know whether the flash and the peal from the cloud were caused by the same forces which were confined in the Leyden jar. Accident at an earlier time disclosed the truth, that friction imparted to certain bodies the power of attraction. But neither curiosity nor accident has given to American genius its strongest impulse. When the want has been felt, thought has removed it. And now the fact is ascertained, that when man would make the lightning his messenger, he may compel the river to give it free passage.

By the light which falls from the past upon the present, we must read our duty as a government and as a people. Agriculture, manufactures, commerce, the mechanic arts ! What have they done for us ? What rather have they not done for us ! They are children of one household, and the head of the house should care for them all alike. And thus one duty as a government is indicated. Excessive legislative interference with individual labor, is hurtful and not helpful to the people. Unequal legislation must be invidious, where equal interests are involved ; and although the full grown man needs not the nursing which the child requires, yet the wise parent will guard with jealous care against the charge of partial patronage. At an early period of our history, the fiscal weakness of the government made it necessary that a line of policy should be marked out, whose immediate consequence was to create a commerce, and to encourage and direct the employment of capital at home. But it has been since the termination of the last war with Great Britain, (let it be the prayer of every good man that it may be permanently our last war,) that by the concurring action of legislation and enterprise, our commercial interests have been enabled to reach their present stature. But neither legislation, nor seamen, nor shipping, nor capital, nor their united power could have attained for us our commercial eminence, if the plough and the loom had been idle. It is our soil that makes the sea of value to us. There are, we know, some seas which our will has converted into soils, and our seamen till them ; nor would it become one who lives where the harpoon-plough is used, to forget the seaman farmer, who labors upon the waters by day and by night throughout the year, who reaps where he has not sown, and gathers where he has not strawed ; whose staple crop is whales, whose works are try works at the best. So intimately connected is the welfare of those great departments of human pursuit, which we at this time represent, that in determining the claims upon us in behalf of one, we set forth substantially the demands of all. And so our first duty springs from that fact of fellowship. Where all are brethren, the love of brethren should exist. Commerce unites these interests and makes them one. Wherever more is made by the hand of man than can be appropriated to the supply of his own immediate wants, that surplus becomes the subject of exchange. The comforts or the wants of life unsupplied at home are thus provided. From the first barter exchanges of the product of the soil for the simplest articles of skill which social life demands, to those giant enterprises which circle the earth, calling to our use all that the world knows of luxury or science, making the civilization of all preceding time tributary to us, the circuit of the merchant extends over the whole land, and upon every ocean our commerce prevails. No class of men are so high in the social scale as to be above its sphere of action. All ranks of society and all regions of the world are impressed by its energy. The wealth of the nation rests on its successful enterprise. If at once the avenues of commerce should be closed and its ships dismantled, the whole land would be stricken with paralysis. Each of the thousand channels through which labor flows would be narrowed. These considerations justify the regard in which the peaceful pursuits of commerce are held among us. Peaceful they must be, for commerce resting upon contract presupposes peace. But if the prosperity of our country is based on its successful commerce, that success is not self-dependent. Commerce leans upon the farmer and the manufacturer, and while she enriches them, draws from them her own support. The merchant exports, buys and sells, but does not make. He uses what others have made, and do not need. If the farmer did not produce or the manufacturer create more than he consumed, there could be no subject for commerce to act upon. The people that are unable to send abroad the products of their soil or of their skill, to procure with them articles of foreign growth or industry, must either be drained of their precious metals, or live destitute of what may not be supplied by their own strength. Accumulation, then, underlies commerce, but that rests upon labor. Here we have reached the foundation principle—labor, human labor ! And better foundation need not be laid. It is of divine appointment, and its uses are divine.

> "Man must labor, nought is sleeping
> In the dimmest, brightest zone,
> From the worm of painful creeping
> To the cherub on his throne !"

He that will not labor, or that may not so use his hand or his head as to do somewhat toward the supply of some want, moral, mental or physical, is a half-man at most. His horse is of more service in the world than he. But it is not to be forgotten that head labor is as worthy as hand labor. Commerce depends upon the one as much as upon the other. And so does agriculture, and so do the arts. It is the recognition of this truth, and its practical application to the condition of laboring men, that should constitute the present work of those who from the laboring man derive their wealth, and those multiform blessings which wealth throws around them. Here is detected the great duty that has been all too much overlooked, which, by reason of what has been done, the present age demands of us. Of what avail is it that our bags are filled with gold, that our warehouses bend beneath the pressure of their goods; that our ships connect us with the world, pouring our treasures upon foreign soils, and returning richer treasures for our consumption? The aggregate wealth of the nation is enlarged, and individual possessions rival the opulence of royalty. But what is the condition of the people—of the hundreds of thousands who create—the grower of grain, the operative mechanic, the workman in the factory, the apprentice? This question should be kept in mind until the answer shall not imply a duty unperformed. Before any effective step can be taken in their behalf, that prejudice must be encountered and removed, that the work of the hand is more productive than that of the mind. The thinking man appreciates at once the surpassing productiveness of mental labor. He that stands behind the plough does well; and so did he do well, whose mind contrived the plough with which the soil is turned. Let not the hand say to the head "what doest thou?" nor the head to the hand "what doest thou?" For God has given to every man both hand and head. But these considerations may more properly be pressed in another connection.

I was stating the dependence, one upon the other, of those branches of our industry for whose protection your noble Institute was founded, with a view of showing, that as their interests were joint and their action upon us united, so they demand of us the performance of certain duties which concern them all. We are, as a nation, and must be if true to ourselves, emphatically an agricultural people. With the exception of some portion of the northern states, where granite crops are raised, *and ice is grown for exportation*, and of some sections of the Atlantic coast, there cannot be found a land where Providence points more emphatically to the sickle and the plough. There were in the United States, during the last year, no less than seven hundred and twenty-nine millions of bushels of grain raised upon our farms; and of these, nearly seventy-five millions have been raised in this state. This amount has been ascertained, and falls short, undoubtedly, of the whole crop. Beside these, the tabular estimates which have been published state that 17,715,000 tons of hay have been cut; that of tobacco, 166,705,000 pounds have been raised; that 872,107,000 pounds of cotton have been grown; and 111,759,000 pounds of rice; and 201,107,000 pounds of sugar; and last, and least in quantity—though our fair friends will think first in quality and of greatest value—that 396,790 pounds of silk have been produced for their consumption. These constituted the crop of the last year. But these do not fill up the measure of our farming industry; for there are cattle upon more than a thousand hills, and the various articles which they lavishly supply, in life and in death, largely increase the aggregate of the annual tribute which the farmer exacts from the soil he cultivates. Nor can this aggregate be diminished, if the privileges of our condition are not abused. Of our institutions we are naturally and justly proud; for they are the work of our own hands. There is this difference between us and most of our trans-Atlantic brethren: that with them, their institutions make the men, but here, our men have made their institutions. It is possible that we are too prone to magnify them. Those who "kneel before the king" charge this offence upon us. It may be a just charge. They partake of our own imperfections. Until man ceases to be human, no form of government or institution of society can be perfected by him. We believe that something has been done, when man may stand upright and worship God as he shall choose—when he may work and "shall receive his own reward according to his own labor;" when he may speak, and fear no man, so long as he shall wrong no man; when, being wronged, the laws afford him suitable and quick redress; when the man of one dollar, who is true to himself, is more estemed than the man of a million dollars who is false; when laws are equal, when, not wealth, nor social elevation, nor accident of birth, nor tenure of office—but Truth, holds the scale; where Justice dwells. If these things are so among us, something has been done;—not all, however; for where free institutions have been planted, man has a right to look for better fruit than "bonds!" The tree of liberty should not be girdled by a chain! But we bide God's time, knowing that out of evil He educeth good. But whether we may or may not be chargeable with extravagant self-love when we speak of our form of government, of our institutions, of our laws, of anything that we ourselves have designed or ordained, we subject ourselves to no such charge in describing the varied beauties of our land, the versatile productiveness of its soil, its rich mountain regions and broad valleys, where, away from the rude clashing of rival interests, our farmers pursue their pure and healthful calling. Where has God bestowed upon his children such a heritage as we enjoy? Of this we may surely boast. But as we survey this broad extent and these boundless resources of our land, where climates rival soils in rich variety; her mountains clasp-ing the heavens, her green fields waving in the sunlight, her borders girded by the ocean, her bosom severed by mighty and rushing rivers and pierced by lakes, themselves ocean-like; and more than all, remember that her sons are free—subject to no restraints, amenable to no laws, accountable to no tribunals not self-imposed and instituted, we are constrained to acknowledge the fearful trust, and to seek the duties it involves: for neither country, nor institutions, nor diverse endowments, shall redeem us from strict account.

Of the great and growing amount of agricultural produce which the different sections of our land afford, what, and how, and where is the consumption?

First, at home! for nineteen millions of men are to be sustained, and can obtain sustenance from no foreign source. The farmer feeds the country. His unostentatious labor makes the heart of the land to beat with life. But his surplus food would be of little worth if no market were open to him except that which he himself could find. His sphere is at home. It is there his virtues shine. He thrives not in the din which men make, but in the quiet which God has stamped on his creation. When the harvest has been gathered in, and the granaries bend under their weight, and the work of the farmer has ended, the merchant and the ship stand ready, and with quick haste the varied products are scattered upon the wings of the wind and steam, by river and by lake, along the iron road or upon the ocean wave, throughout our own borders, and wherever upon the earth there are men to be supplied. Such are the calling of the farmer and the aids the merchant renders him. Is it not passing strange that where interests so intertwined are manifest, aught of jealous feeling should put asunder what has been thus joined together? There is with us a singular closeness and unity between these leading pursuits. For the commerce of most vital import to us as a nation striving for individual and aggregate advancement, for the attainment and security of solid comfort, is not that whose stage is the world, but that whose design and scope is confined at home. You live here in the focus of commercial light and heat. The keen contest for mastery in the difficult career of life has secured for you the wreath of the victor. We yield the palm to you with one voice. Your rich city is our queen of commerce. She stands upon her own proud monument. But its base rests on the soil we tread upon. The farmer by his hard toil has worked for you; the manufacturer, who from the raw material has wrought out his fabrics by a magic whose quick and potent spells would but a few years back in the history of the world have invoked the ban of witchcraft; and the genius of mechanical industry, warmed into life and rendered strong and active by the demands which the farmer and the loom have created—these all have worked for you, and at your hands claim encouragement, protection, patronage.

There have existed commercial cities whose bright career has startled the generations that beheld their growth, which have been made great by foreign enterprise. About three thousand years ago Carthage was built. A wandering queen landed with her retinue upon a small isthmus, scarcely three miles broad, near a bold promontory which divides the southern shore of the Mediterranean. Her Canaanitish ancestors had left their homes when Joshua led his hosts through the divided waters. She fled from the cruel oppression of her brother, to found upon the African coast a nation that should rival Rome in great possessions. For her first "real estate" Dido is said to have paid even less than the sharpest white man of modern days allowed the Indian for his inheritance. For a small consideration she bargained for as much land as the hide of an ox would compass. Her simple customers, who deserved the cow-hide rather, readily agreed. But the Tyrian exile, bringing to her aid the mechanic arts, caused the skin to be cut into long strips, and so enclosed a territory whose breadth satisfied her and quite astonished them. In this branch of business no man has yet out Didoed the queen of Carthage. In commerce Carthage had no rival. Her marine was placed by old historians above that of the world beside. All the ports of the Mediterranean were familiar to her, and were visited for purposes of traffic. From the farthest east then known, to regions in the west, beyond which no Columbus had explored, her busy mariners traversed. The mercantile skill and success of the Carthagenian extorted praise from the father of history. But it was not to domestic agriculture that she was indebted. Her merchants enjoyed the carrying trade of the world. To her manufactures and her skill in the mechanical arts she owed much, and from her Tyrian ancestry derived that genius which compelled the Roman historians to designate as Punic the most remarkable results of inventive skill. But although domestic agriculture contributed so little to her growth, it would be difficult to estimate the value to her of agricultural industry; for she availed herself of the produce of the world, and by consummate skill made other granaries answer to her call. But for the successful prosecution of our commerce, our own resources are sufficient. We need no Sicilian or Sardinian colonies. Within ourselves we possess all that soil or climate may afford for domestic use or foreign export. What they supply, however, would quickly and inevitably compose a stock which commerce could not easily dispose of, if from our own shores the raw material and that alone were to be shipped. And thus the necessity exists for the protection and encouragement here at our own doors of the third of those great interests, whose triple alliance shall confirm and establish each other, and can alone perfect our self-relying strength. For no nation is independent whose essential wants are unsupplied at home. Nor has the lesson of the past been learned, if we are not yet convinced that the people who only raise but do not make, are in no condition to deal on equal grounds with foreign industry. If the physical strength of our nation should be expended on the soil, not only would the accessible markets abroad be overstocked, but the muscle and sinew of our men would be forced to wage an unequal war with the half paid labor of the world beside.

Such is not the destiny which God has marked out for us, if we use his gifts aright; for not reason alone, but nature, would condemn us, if as a people in very truth we take no thought wherewithal we shall be clothed. The thousand water falls, whose voices chorus the music of the forests, would condemn us; for their significant notes have not fallen upon dead ears. We have understood their meaning as plainly as if the genius whom the old mythologies placed over them, should rise from their green banks to interpret it in literal speech. These running rivers were made for human use, as truly as the soils they nourish. The poet who dreams beside the brooks may sorrow if the discord of earthly machinery shall interrupt the song of the stream; but the man—if he be poet too—in that machinery itself, complete in all its parts, and by volition seeming to perform its work, coming in aid of the running waters, and enabling them to minister in a new form to human wants, shall read a perfect poem, the great idea of which God gave to man.

In respect to this great interest which has within a few years past absorbed such vast amounts of capital, and controlled to such extent human labor, it is not singular, perhaps, that the opinions of practical statesmen have varied, and that even now such diverse views are entertained by men who, with equal honesty of purpose, would promote the public good. It was but sixty-four years ago that Thomas Jefferson said, "Such is our attachment to agriculture, and such our preference for foreign manufactures, that, be it wise or unwise, our people will certainly return as soon as they can to the raising raw materials, and exchanging them for finer manufactures than they are able to execute themselves."

But sixty-four years, when the world moves by machinery, is a Methuselah's life; and if that eminent philosopher had anticipated the realities which these days disclose, he had also foreseen how admirably, under his own institutions, the finest manufactures of Europe might be rivalled by a people whose attachment to agriculture remained unshaken.

Facts are surer guides than theories can be.

> "Experience is by industry achieved,
> And perfected by the swift course of time."

What the measure of protection is that goverment may most wisely extend, it is no part of my present purpose to consider. But two conclusions the past has established; that a permanent and steady policy should be pursued, and that protection as such should be so applied, that the favor granted may not prejudicially affect interests equally important, and deserving equal consideration.

Of the value of our manufactures as a means of supplying our home wants, no difference of opinion can exist. Our experience has been too recent and too impressive, not to have convinced us that the same parental care with which other nations have uniformly guarded the labor of the subject, must be assumed and felt by our own toward that of the citizen, if the citizen and the subject are to trade together upon terms of reciprocal advantage. Such considerations concern us at present, only as they tend to make plain the intimate union of those interests which this Institute would encourage. I do not believe in the truth of the position, that if the manufacturer is helped, the merchant or the farmer is by consequence hurt.

That partial legislation is possible, we know; but that because the life and health of one was preserved, the others must fall sick, is a theory all fancy-built. For what are our manufactures wanted? That labor may be profitably employed; that all the people shall not, in the words of Mr. Jefferson, return to the raising of raw materials; that our citizen producer shall not be at the mercy of the subject manufacturer; that we may not be for ever compelled to exchange raw material, which is cheap, being mainly the product of labor, for the same material, after foreign mind and skill have quadrupled its worth; that so we may not by compulsion pay a bounty upon foreign intelligent skill. Have we not mind lying fallow, and skill which only craves opportunity? Have not our waters head enough to turn machinery? Must we too go to the river Jordan? Are not Abana and Pharpar as good as the waters of Israel?

We have sincerest respect for the surpassing energy with which England, in one sense foreign, yet in the highest and truest no stranger to us, has pressed onward in her career. She has marched with giant stride toward the fulfilling of her destiny. In looking upon her, we may remember that it is "excellent to have a giant strength;" but must not forget "how tyrannous 'twould be to use it like a giant." Our manufactures were born of our necessities. It was because food could not cover the nakedness of the land that the citizen farmer made cloth. Timely encouragement and endeavor, undismayed by reverse, have already won success; and now the manufacturer seeks for his material from the soil which is tilled; from the buried ore exposed to view; from the forests that are levelled; from the seas that are explored; from inanimate and inorganic matter, and from all grades of life below our own.

Facts yearly pressed upon our notice demonstrate the great and growing demand that, by reason of these nurseries of creative force, exists for all products which directly sustain life, and which, by the agency of steam and the application of skill, are turned to man's account. The surest guaranty of peace that any people can have, until peace shall be loved for its own sake more honestly than among the nations it has been hitherto, is the possession, within itself, of those means of defence, and of support, which may enable it to stand self-poised and self-reliant. With an agricultural strength competent to meet promptly all demands upon it, and manufacturing industry and power equal to any emergency, while we cherish, upon principle, good-will toward men, we may rest assured that occasions of offence will less frequently arise and more quickly be removed.

The energy which has recently advanced so rapidly these industrial pursuits, has given an impulse to the mind of our people, which has filled the land with proofs of their inventive genius. From the valuable report of Mr. Ellsworth, we learn that there have been in the United States, prior to January, 1845, fourteen thousand and twenty-four patents issued, five hundred and two of which were granted during the present year. In 1844, one thousand and forty-five applications for patents were made at Washington. Of the five hundred and forty-three applicants who were refused, probably the far greater number were ignorant that the principle of their inventions had been earlier ascertained. They were their inventions, none the less, truly; and if to these it were possible to add the many improvements in machinery, of more or less value, the use of which has not been secured to the inventor by patent, the aggregate of inventive skill among us for the last twelve months would betoken an energy of thought which no nation upon earth has rivalled.

It would be a hard task to enumerate the uses to which the few elementary mechanical powers have been applied since the commencement of the present century. Machinery has supplanted human labor everywhere. All things which necessity demands or luxury solicits, the machine makes. It wards off from man the heat of summer, and protects him from the cold. It supplies him with food and raiment. It ministers to his intellectual wants—laying open before him all the ways of knowledge. If he would lie down, it makes and furnishes his couch. If he would move, it lifts him up—bearing him with the speed of thought where he would be borne. The powers of nature are constrained to serve freely and without price when man by machinery invokes them. The waters are made to work. The wind cannot blow where it listeth. The quick lightning has been compelled to come and to go, and to do errands for its unrelenting master. How extensively electricity may be available upon the farm, we cannot yet foresee. The idea of this use of it belongs to a lady, who poured electric fluid from her conservatory into her terrace through a wire, and the grass, to her amazement, grew green in winter, and the snow was melted from the surface, while all surrounding vegetation was stiff and white. Upon this hint, after some few years, a thoughtful agriculturist acted, and by a simple process conducting electricity from the air to the roots of plants, demonstrated that this invisible power might be successfully applied to the uses of the farm.

And now, as I am speaking, our newspapers, which have this advantage over electricity, that nothing is so isolated that they cannot reach it, are telling us that in your neighboring city of Philadelphia a musical instrument has been invented upon new principles—"the active agent being electro-magnetism, which passing through wires, breathes forth sounds equalling the Æolian harp in softness, and rivaling the organ in the distinctness of its notes." And so it seems to have become a literal truth, that by the agency of human will, acting through simple machines of human contrivance, the lightning, this mightiest of nature's forces, may be so tamed for service that it will work in the garden for the farmer—making his vegetables grow, or play in the parlor for his wife—putting her to sleep with its sweet music!

Without pausing to calculate the market value of these singular appropriations of the energies of nature, what room for reflection is there in the fact that man is able thus to seize and convert to his own use the subtilest elements! How by a little thought he multiplies his strength! Standing alone, who so weak, so helpless as he. Yet has he reduced the world to himself. Without external aid he could accomplish nothing. But he does accomplish all things, compelling all to be his agents and to work his will.

The arts are the humanizers of life; all that is not of the earth in man has been elevated as they have advanced. They have been the handmaids of religion, and have done her good service in the world, the ruder and the finer arts alike. All arts are fine arts, and the useful the finest. We look upon the statue of an old master, or upon the breathing marble of Powers, and our hearts swell with delight, for we see the truth embodied there. So also is the truth embodied in the nicely adjusted machine which deep thought conceived and exquisite skill wrought out. The steam-ship is a work of fine art as truly as a picture of the waters she moves upon or the shores she visits; and he who fashioned it, adapting each nicely adjusted part so as best to effect the end proposed, has as clear an eye for the beautiful and the true, as the artist who breathes out his soul in the creations of the pencil. And so in this outer world, where nature by her "peaceful strivings and doings," addresses us in that combined "outline of cloud, and sky, and sea, and coast, sleeping in the morning or the evening light."

"The hills
Rock ribbed and ancient as the sun—the vales
Stretching in pensive quietness between
The venerable woods—rivers that move
In majesty, and the complaining brooks
That make the meadows green; and, poured round all,
Old ocean's gray and melancholy waste."

Here are pictures which Zimmerman may not equal. But more exquisite than these is this machine—the human hand—the suppliant servant of the mind!

But it is the mechanic arts, as encouraged by the demands of the farmer, the manufacturer, and the merchant, that interest us now. The machine is the instrument with which the art is carried on. It is itself a work of art, contrived to increase human power and enlarge its sphere of action. By its aid a single man works with an hundred hands, and so becomes fifty men, and ceases to be one. But if mechanic arts are not fostered, inventive skill would be unknown, for its want would not be felt. Thought is the parent of invention—not necessity. Necessity awakens thought; and so it will be found that in those arts which have not been successfully pursued, for lack of proper instruments, machines, tools, the want has aroused thought, and the needed invention has followed. At the close of an interesting report made by Mr. Charles M. Keller to the late Superintendent of Patents, this fact is stated, that "those branches of the arts which have been in a prosperous condition during the past two years, as for instance cotton manufactures, have received a smaller number of contributions from inventors, than those which have been in a depressed state, as civil engineering."

In proportion, then—and here is the point which I would now establish—as the need is felt of improved machinery, inventive skill is developed and mechanic arts advance; and that necessity is recognized in the precise proportion that commerce and those associate pursuits, whose joint progress we are assembled to promote, are encouraged by our government and ourselves.

Thus it is apparent how, in our country, and under our institutions, these great interests, by mutual action, advance each other. And so that duty before alluded to, results of balanced and impartial patronage.

But the past imposes another work upon the present. And all imperfectly as I have discharged thus far the office which your favor, no my deserving, has assigned me, you would esteem it blame-worthy if that were not considered. For who are they that constitute the strength of the prominent branches of human industry? Who fill the granaries of the land, and make available the loom, and work out in their thousand lowly ways the varied defences, and comforts, and luxuries of life? The results of labor are all around us. We see them in the temple of God, in the palace or the rich man, in the iron ship, in the magnificent works which adorn your city, and in that especially by which the waters of a river are conjured from their bed to supply your wants.

But where is the laborer, and what is done for him? We claim with earnest voice protection for ourselves, and legislation responds to the call. Our manufactures are extended, and commerce multiplies her sails, and in their growth, agriculture and the arts live and thrive. But the great end of this is national and individual wealth; and that end has been gained, and therein we rejoice. But the success which has marked our progress, and crowned our work, is itself a trust, and its responsibilities we may not fly from if we would.

Men who are endeavoring by legislative enactment and individual effort to meliorate the condition of the laboring classes, complain, and perhaps with truth, that the rates of compensation enjoyed so poorly remunerate them for the stipulated work; and if we go into the field or the workshop to ascertain what is done for those whose lives are expended in producing the first results of labor, we may find much room for sad speculation. There is something wrong here, that requires the application of thought for its removal.

But there are considerations which more appropriately address themselves to us here and now. Gathered together for purposes national in their character, it is not enough that we congratulate ourselves on that proof of success which great possessions furnish. There are other interests than those which the "dollar" represents; and though uncounted, thousands reward our efforts, we have failed, have we not, if we have kept out of sight the claims of those, without whose labor-spent lives we had been poor indeed.

The great work which the present has to perform, is to contribute of its strength to lift up the laborer, and to make him more and more a man. The cultivated farmer is better than the cultivated farm. An instructed mechanic who appreciates the principles of his trade, applying science to labor, is as removed from the untaught workman whose only knowledge is to use his tools, as the dead machine from the cunning hand that formed it. Nor is there room to doubt that from the classes of laboring men themselves, upon the farm, in the workshop and the factory, a cry is coming up for help to those who alone may aid them. In the promotion of agricultural schools and associations, of apprentices' libraries, of mechanics' institutes, we read the signs. They are not to be mistaken. They mark one era in our history that is full of promise. Never before have such things been seen as now. But of himself, the laboring man can do little. From his youth up, the hours of his life have been toil-worn. He needs encouragement, assistance, sympathy. And he looks for these things from you. Shall he look in vain? But what is to be done? That is an important question; but after all it is not there the great battle is to be fought. When conviction is heartfelt that something should be done, the work is half accomplished. It is when the feeling is skin deep only, and is not conviction, that difficulties start up and questions are put. He who is thoroughly persuaded that he has a work to do, is more than half informed how he is to do it. But to us the question is answered. We know what is to be done. From the highest rank in society to the humblest walk, a cord extends, that unites the two extremes. The one is to be elevated, or both must sink.

Labor demands knowledge, and the cry must be heeded. Not the knowledge of books, nor yet of men, but that knowledge of the principle of things applicable to itself in its various phases and forms, whereby it shall become labor effective, and not labor lost. We need not invite the laborer into the fields of general learning, nor are we called upon to enter them ourselves. But in those departments which illustrate his pursuits, it is as right, yes, and as needful, too, that the operative upon the farm should be instructed, as that the professional man should be wise in the learning of his school. We recognise our duties to the young, and in the common schools established and spread throughout the land, we testify our faith in education. Let that faith be unshaken, for our hopes rest on the young. But that is not enough. The professional student is urged onward by richly endowed colleges and learned lectures, where experiment refutes error and establishes truth. So let the mechanic and the agricultural student be helped onward in their career. We should not willingly commit our rights or health to the care of one unprepared by diligent study for his work! Is no preparation requisite by him who would solicit from the earth its treasures? The physician by careful labor investigates the causes of disease, and by minute analysis defines the action of each remedy. He studies the physical constitution of his patient, and not blindly, but with thought and foresight acts.

The farmer is the physician of the soil—the doctor of grains and grasses. He should know when and why to drain off hurtful fluids, to neutralize noxious elements, and correct destructive tendencies. He must learn to knock reverently at the door where nature keeps her mysteries concealed from vulgar gaze. But if he do thus knock, it shall be opened to him. In your own State, not less than five hundred thousand men compose her agricultural strength. Of these how few there are who listen with living ear to nature's teachings. Yet her laws are simple and uniform, and from the diligent inquirer she never turns away. Between the proud tree of the forest, the monarch of a century, and the constitution of the soil which nourishes its roots, there is a close and immediate connection. But centuries passed away, and the oak, and the beech, and the pine, in their several generations, flourished and decayed, before this simple truth was revealed to man. Between the solid trunk and spreading branch, and the grains and grasses that grow upon the same soil, the same intimate and beautiful relationship exists.

The scientific agriculturist, who ascertains what constituents compose his soils, and the various grains which he would grow, has in his own hand the law which God established, and by which he works in his creation; for not a blade of grass nor blushing flower springs up by the way side, that owes not its life, and its beauty, and its fragrance to laws which He ordained, but which by earnest seeking man may find out. The ploughman who whistles as he works "for want of thought," will not read the book before him, for he does not know that it is opened. It is a sealed volume to him, while all the time to the open eye its pages glow with beauty and instruction. Under the surface of the earth there is a soil where other elements exist in different combinations, and with his plough he turns it up to the fresh air, mixing the two soils together, so that each shall supply the other the strength it needs. But of the process going on before his eye, he is ignorant, and ignorant without fault. From early childhood he has awaked day by day to the same dull round of toil; suspended only by the welcome night, that his wearied body might be strengthened for renewed labor.

But his children may know, for now the time is at hand when the claims of labor shall be heard.

> " Far back in the ages
> The plough with wreathes was crowned,
> The hand of kings and sages
> Entwined the chaplet round,
> Till men of spoil disdained the toil
> By which the world was nourished,
> And dews of blood enriched the soil
> Where green their laurels flourished;
> Now, the world her fault repairs!
> The guilt that stains her story,
> And weeps her crimes, amid the cares
> That formed her earliest glory."

But her earliest glory did not shine with the lustre that shall crown her brow when science shall weave the wreath and the laborer shall wear it.

There are in other lands, esteemed free, and favored above most of the nations of the earth, obstacles which the constitution of society presents to those who acknowledge the rights of labor, and advocate its claims. Where men are classed by birth, and titled proprietors own the soil, which descended from their fathers, and must be transmitted unalienated to the generations that shall succeed, the lot of the laborer may be with difficulty improved. But here, thank God, we are not cursed by institutions which stamp the freeman as a slave because he tills the ground. From his humble cottage, the farmer's boy may walk by quick step into the high places of honorable trust, nor is there any home so lowly that may not send forth its son to judge or rule the land. With us the laborer is also the freeholder; and that one fact removes us by a gulf world-wide from the proudest nations of the earth. To own the soil he cultivates is the rare privilege which our laborer enjoys. The home he lives in is his own. From the hearth-stone around which parent and child gather, and from which the prayer and the hymn ascend, no man shall separate him.

The trees that he plants, ripen for him their fruits. The flocks that he feeds, yield to him their fleece. The grass grows for his use, and the brook that murmurs by his door, no power in the land may turn from its shallow bed.

There is in the condition of our laboring classes no obstacle in the way of those who seek their elevation; but all those privileges which they enjoy, not only prepare them to aid in the great work, but furnish us with stimulating motive for exertion. That which is true of the laborer in the field, applies with equal force to the operative in the factory, and the artisan in the shop. What of wealth we enjoy, is traceable directly to their labors, and at our hands they jointly and justly demand consideration, sympathy, instruction.

In this Institute, whose eighteenth anniversary has now been held, and to whose great and growing usefulness the industry of the country bears witness, we see a pledge that the claims of the American laborer will not be overlooked. Not from the Empire State, but from the Union, the laborer comes up to this high festival. The ingenious mechanic, who without your aid might live unknown, brings here his offering, and receives from you the hand of fellowship. The manufacturer contributes his beautiful creations—the works and wonders of machinery and skill. The harvest moon is in the full, and by its soft light the farmer bears his fruits. All who essay by apt invention to multiply the comforts or the luxuries of life, exhibit here their models, and explain their curious mechanism: and to all alike, sympathy, encouragement, reward, are here extended. Nor may we be unmindful of that gentle, loving encouragement which woman grants. Better than all legislative protection, is that which the true woman gives to the industry of her land. Let her, too, be mindful of them that labor, of their real humanity, of their claims to sympathy, and with her persuasive voice assert their rights. With such aids the work is well begun. Agricultural schools, mechanics institutes, the lecture room, the lyceum, the library, these are our machinery; and from the material of native mind, a fabric shall be wrought richer than cloth of gold. For

"What constitutes a state?
Not high raised battlement and labored mound,
Thick wall or moated gate;
Not cities proud, with spires and turrets crowned,
Not bays and broad armed ports,
Where, laughing at the storm, rich navies ride;
But men, high-minded men!
With powers as far above dull brutes endued,
In forest, brake, or den,
As beasts excel cold rocks and brambles rude;
Men, who their duties know,
And know their rights!"